```
Change 216876 on 2005/04/08 by vromaker@MA VIC P4
updated overview, removed some out-of-data info
Change 216874 on 2005/04/08 by vromaker@MA_VIC_P4
update
Change 191268 on 2004/10/12 by rramsey@rramsey_xenos_win_orl
Add a page for newCurCnt table
Change 188248 on 2004/09/17 by lseiler@lseiler win 1 r400
Fixed a minor bug in the stencil function table
Change 149989 on 2004/02/19 by lseiler@lseiler_r400_win_marlboro1
Fixed bug in Zplane figure
Change 138566 on 2003/12/19 by fliljero@fl frank
Added 3 new packets for improved type-0 packet processing:
Incremental_Update_State/Const/Instr
Change 137750 on 2003/12/16 by fliljero@fl knarf
Added optimized Event_Write* packets & new opcodes
Change 137101 on 2003/12/12 by fliljero@fl frank
Added Wait_Reg_Eq & Wait_Reg_Gte PM4 packet descriptions
Change 137025 on 2003/12/11 by fliljero@fl knarf
updated documentation on error checking and removed reference to type-1 packet.
Change 136800 on 2003/12/10 by fliljero@fl knarf
Updated description for MEM_WRITE_CNTR to include how to change the core clock interval
from 1 <--> 16.
Change 136780 on 2003/12/10 by fliljero@fl_knarf
Updated Me Init packet for Header Dumps & Error checking...added note about recompiling
microcode to enable these debug only features.
```

Change 136762 on 2003/12/10 by fliljero@fl knarf

```
Updates related to CP_MEQ
Change 136302 on 2003/12/08 by fliljero@fl_frank
Updates to MEQ related registers & busy signals
Change 135746 on 2003/12/05 by fliljero@fl_knarf
Updated CP Interrupt packet for performance
Change 134564 on 2003/12/01 by fliljero@fl knarf
Max Buffer Size in Indirect Buffer Packets is [19:0]...Spec had [22:0]
Change 133990 on 2003/11/25 by jhoule@jhoule doc 1t
v1.80 - Indicated that NO ZERO srf mode is unsupported for Xenos (will currently only
work in the VC path)
Change 133807 on 2003/11/25 by alleng@alleng r400 win marlboro 8200
Deleting old files...
Change 133806 on 2003/11/25 by alleng@alleng r400 win marlboro 8200
Deleted old files...
Change 133805 on 2003/11/25 by alleng@alleng_r400_win_marlboro_8200
Deleted old files...
Change 132833 on 2003/11/19 by fliljero@fl knarf
changed R400 reference to Xenos
Change 131864 on 2003/11/13 by frising@frising r400 win marlboro
-For cube instruction SrcA swizzle is now .zzxy. Also tried to clarify the differences
between what's shown in the numerics doc and what actually happens in the HW for cube
instruction.
Change 130982 on 2003/11/10 by mpersaud@mpersaud_r400_win_tor
Submit delta doc for R400 R500 tvout changes
Change 130037 on 2003/11/04 by fliljero@fl knarf
```

```
Added registers and PM4 packet changes related to the Software Managed Instruction
Store...
Change 129511 on 2003/10/30 by tien@ma_spinach
Some additional info on perf and debug regs
Change 128832 on 2003/10/27 by tien@ma_spinach
Added info to perf and debug regs..
Change 127821 on 2003/10/22 by bbuchner@fl_bbuchner_r400_win
Updates
Change 127682 on 2003/10/21 by tien@ma spinach
A little more one perf regs
New debug regs doc
Change 127599 on 2003/10/21 by tien@ma spinach
Added some info the the perf counters for TP/TPC
This is tough :-) but kinda fun :-)
Change 127541 on 2003/10/21 by tien@ma spinach
Filled in results for all cases
Added tri_juice cases
Added mip_frac = 0 case
Added z_frac = 0 case
Will define perf counters for TPC/TP here for the heck of it..
Change 126714 on 2003/10/15 by jayw@ma jayw lt
old update with John's change
Change 126588 on 2003/10/14 by tien@ma_spinach
Filled in numbers for a bunch of cases
Change 126058 on 2003/10/10 by frising@frising_r400_win_marlboro
-update scalar mova instructions to return MAX_S(SrcC)
Change 125972 on 2003/10/09 by frising@frising r400 win marlboro
-update vector mova instruction to be two operand with result to GPR being max of
```

```
operands. Scalar mova instructions were updated to always return srcC.w.
Change 125952 on 2003/10/09 by beiwang@bei_pc
Added description and restrictions on RB->MH and MH->RB requests routed through MCCI.
Change 125904 on 2003/10/09 by jhoule@jhoule doc lt
v1.79
- Added stack map support
- Changed SIZE packing for 2D to allow for common decoding between stack maps and 2D \,
- Stated that SIZE values must contain w-1, h-1, and d-1
- Added "Stack" line to the maximum texture sizes
Change 125618 on 2003/10/08 by jiezhou@jiezhou_r400_win
small updating
Change 125614 on 2003/10/08 by jiezhou@jiezhou r400 win
fix Hyperlink, add DTO description, Test counter description
Change 124923 on 2003/10/03 by jhoule@jhoule doc lt
v1.78
TFetchInstr:
- Removed unsupported opcodes for the sake of clarity
TFetchConst:
- Moved DIM field to last DWORD (kept the old one temporarily)
- Added ANISO BIAS field
Formats:
- Added FMT DXT3A AS 1 1 1 1
Deprecated the ARBITRARY FILTER fields from TFetch instr+const.
Change 124599 on 2003/10/02 by fliljero@fl_knarf
no change
Change 124344 on 2003/10/01 by lseiler@lseiler_r400_win_marlboro
```

Changes to depth formats to make HW more efficient

```
Change 124325 on 2003/10/01 by fliljero@fl knarf
added 2nd interrupt from MC to RBBM
Change 124280 on 2003/10/01 by fliljero@fl knarf
added MC0|MC1 RBBM int signals
Change 123990 on 2003/09/30 by fliljero@fl knarf
added changes to set_state and load_constant_context
Change 123796 on 2003/09/29 by vbhatia@vbhatia r400 win marlboro
Slight update of fmt49, to reflect changes in tp_fmt_encode hardware
Change 123793 on 2003/09/29 by tien@ma_spinach
First check-in
Change 123764 on 2003/09/29 by vgoel@fl vgoel2
closed bug 104
Change 123315 on 2003/09/25 by fliljero@fl knarf
Updated Const_Prefetch packet to issue only once per LCC packet. When the LCC ordinals
repeat, they also repeat in the Const Prefetch packet. Formerly, there was a new
Const_Prefetch packet for each repeat of the ordinals.
Change 123064 on 2003/09/24 by fliljero@fl_knarf
Updated Subblk Prefetch packet to send the Header only once, followed optionally by
each ordinal on a mismatch.
Change 123059 on 2003/09/24 by ashishs@fl ashishs r400 win
closing bug 40 and 116
Change 123057 on 2003/09/24 by tien@ma_spinach
Upadted for the week 9/24
Change 123011 on 2003/09/24 by csampayo@fl_csampayo_r400
Closed bug #s 121, 123
Change 122955 on 2003/09/24 by mkelly@fl mkelly r400 win laptop
```

```
Closed bugs 90 and 91...
Change 122800 on 2003/09/23 by fliljero@fl_knarf
made drawing change to reflect changes to SRC0 \& SRC1 removal of MICROM, MRL \& MRM as
possible sources. also removed the BOOLEANs as a possible source for SRC1.
Change 122794 on 2003/09/23 by jhoule@jhoule doc lt
Update for the new Ws which has 11b mantissa (12b total)
Change 122741 on 2003/09/23 by csampayo@fl csampayo r400
Closed bug# 117. Some housekeeping
Change 122572 on 2003/09/22 by efong@efong_r400_win_tor_doc
added in dglen
Change 121971 on 2003/09/18 by efong@efong r400 win tor doc
New update to remove people who have left and new PEYs
Change 121907 on 2003/09/17 by alleng@alleng r400 win marlboro 8200
Minor fixes, rearranged, added SC efficiency, vector ratios, etc...
Change 121820 on 2003/09/17 by vliu@vliu_r400_cnnbdv3_win_cvd
Initial revision
Change 121788 on 2003/09/17 by tien@ma spinach
Updates for the week
Change 121752 on 2003/09/17 by koyu@kyu
added SQ spreadsheet, added -optimize to pm4opt redundant LCC and SET CONST pkts
Change 121616 on 2003/09/16 by alleng@alleng_r400_win_marlboro_8200
Added new perl script to go direct from phantom.csv to the file.xls file.
Currently need to take this file, phantom template.xls (in pv), and the phantom.csv
and test sum.txt files created by running the test in one directory and execute this
```

script (perl perf2xls.pl).

Cannot be run on linux and requires the OLE32 perl module installed... Change 121318 on 2003/09/15 by ctaylor@fl_ctaylor_r400_win marlboro Removed as these were redundant drawings. Change 121306 on 2003/09/15 by vliu@vliu r400 cnnbdv3 win cvd Test tiling library Change 120795 on 2003/09/11 by fliljero@fl_knarf added zpass_done info to the event_write packet Change 120701 on 2003/09/11 by lkang@lkang_r400_win_tor deletion Change 120508 on 2003/09/10 by tien@ma spinach More updates afetr email from JOcelyn Change 120486 on 2003/09/10 by tien@ma spinach Updates for the week Change 120303 on 2003/09/09 by fliljero@fl_knarf added predicated bin test results (RT/nRT) to State Management register w/index=0xDChange 120271 on 2003/09/09 by fliljero@fl_knarf Update Event Write packet for new functionality for the $zpass_done$ event ... clears the context valid flag, which in turn will cause the context to be rolled on the next state packet. Change 120048 on 2003/09/08 by jayw@ma jayw lt changed pmask order in cache for 4-sample John found better arrangement. one read for pmask and stencil no ram line overlap.

Change 119978 on 2003/09/08 by fghodrat@ma_fghodrat

moved to xenos tree

Change 119939 on 2003/09/08 by fliljero@fl knarf

```
added 128-bit write enable to the MH field to the CP_DEBUG register.
Change 119760 on 2003/09/05 by alleng@alleng_r400_win_marlboro_8200
Added new tests to pv results
Added VGT and PA rates to the phantom template
Change 119726 on 2003/09/05 by fliljero@fl_knarf
added predicate disable bit to CP DEBUG
Change 119667 on 2003/09/05 by fliljero@fl knarf
removed DATA ordinal from the MEM_WRITE_CNTR packet description
Change 119663 on 2003/09/05 by fliljero@fl knarf
added MEM WRITE CNTR opcode
moved SET_BIN_MASK/SELECT opcodes to unused locations
Change 119540 on 2003/09/04 by tien@ma spinach
UPdated some missing fields
Change 119483 on 2003/09/04 by frising@frising r400 win marlboro
v.1.77
-Added new compressed texture formats: FMT DXT3A, FMT DXT5A and FMT CTX1 along with
associated documentation.
-all these formats support degamma
-DXN now also supports degamma
-removed some cruft :)
-closed open question on supporting color keying
Change 119460 on 2003/09/04 by mkelly@fl mkelly r400 win laptop
Branching example slides.
Change 119373 on 2003/09/04 by fghodrat@ma fghodrat
update todo list
Change 119321 on 2003/09/03 by tien@ma_spinach
MOre changes
Change 119315 on 2003/09/03 by tien@ma_spinach
```

```
Something wacky with the clientspec, need to check in to re-update, plus some more
updates form mtg.
Change 119301 on 2003/09/03 by fliljero@fl_knarf
made updates to the event write packet and added new associated register:
CP ME CF EVENT SRC
Change 119277 on 2003/09/03 by fghodrat@ma fghodrat
Rename cg_pm_r500.doc To cg_pm_xenos.doc
Change 119259 on 2003/09/03 by tien@ma spinach
Updated for this week
Change 119253 on 2003/09/03 by bbloemer@ma_bbloemer
Added new document.
Change 119223 on 2003/09/03 by fliljero@fl knarf
added CP PROG COUNTER,
related update to CP_ME_CNTL,
related update to EVENT WRITE packet, &
related new PM4 packet MEM_WRITE_CNTR
Change 119196 on 2003/09/03 by fghodrat@ma fghodrat
cg and pm spec for xenos
Change 118796 on 2003/08/29 by keli@keli r400 win tor
updates
Change 118786 on 2003/08/29 by keli@keli_r400_win_tor
Toronto Virage Memories Generation
Change 118771 on 2003/08/29 by llefebvr@llefebvr_r400_montreal
Fixing number of bits in the auto-count.
Change 118731 on 2003/08/29 by keli@keli_r400_win_tor
Document for Code coverage, formal verification, leda and synthesis report and web page
generation
```

Change 118709 on 2003/08/29 by fliljero@fl fliljeros added real-time versions of the predicate registers: BIN_MASK & BIN_SELECT Change 118570 on 2003/08/28 by kryan@kryan r400 win marlboro DOCS - Clean up - Update some references and outdated facts. Change 118408 on 2003/08/27 by fliljero@fl_knarf updated/added coherency registers and interface updated/added predicate registers and description Change 118393 on 2003/08/27 by tien@ma spinach Updated the list Merged cl and non-cl rtl tasks Change 118362 on 2003/08/27 by fliljero@fl knarf added type-3 predicated packet related information Change 117997 on 2003/08/25 by lkang@lkang r400 win tor incremental update for physical partition Change 117602 on 2003/08/21 by tien@ma_spinach Updated Change 117591 on 2003/08/21 by mkelly@fl mkelly r400 win laptop Slides for Perforce Branching presentation. Change 117496 on 2003/08/21 by frising@frising r400 win marlboro v.1.76 -changed polarity of INDEX_ROUND bit in vertex fetch instruction Change 117394 on 2003/08/20 by tien@ma spinach Gradient task added Change 117320 on 2003/08/20 by jyarasca@jyarasca r400 win cvd

Updated scheduling information on 247 Linux and 247 Chip Linux

```
Change 117312 on 2003/08/20 by tien@ma_spinach
Change 117236 on 2003/08/20 by tien@ma spinach
Added some more tasks to list
Change 117002 on 2003/08/18 by tien@ma spinach
Added to Perforce so I can edit it on multiple machines :-)
Change 116974 on 2003/08/18 by tien@ma_spinach
Fixed the encoding. 16 EXPAND are going to need their own :-)
Change 116968 on 2003/08/18 by tien@ma spinach
Describes how {\tt DATA\_FORMAT} is encoded to reduce logic after walker.
Change 116959 on 2003/08/18 by tien@ma spinach
Filled in more stuff for test list
Added to-do list
Change 116958 on 2003/08/18 by ctaylor@fl_ctaylor_r400_win_marlboro
Added SC block diagrams from Mike Mantor
Change 116957 on 2003/08/18 by jayw@MA_JAYW
updated pmask and stencil
Change 116952 on 2003/08/18 by beiwang@bei pc
Added reminder for tPDEX test during Dynamic CKE test
Change 116866 on 2003/08/18 by jayw@ma jayw lt
no change
Change 116789 on 2003/08/15 by jayw@MA_JAYW
1 and 4 sample cache line arrangement updated
Change 116785 on 2003/08/15 by tmartin@tmartin_r400\_win
```

```
added r400vc_fetch_mode_01 and r400vc_array_size_01
Change 116764 on 2003/08/15 by tien@ma_spinach
Added info
Change 116749 on 2003/08/15 by tien@ma spinach
Added some info.
Change 116748 on 2003/08/15 by tien@ma_spinach
Adding...
Change 116699 on 2003/08/15 by jayw@ma_jayw_lt
visio bugs present
Change 116634 on 2003/08/14 by ashishs@fl ashishs r400 win
updated the tracker with 5 more ALU instruction tests. Also updated the total count on
ALU instructions thereby increasing the project overall % complete
Change 116622 on 2003/08/14 by mkelly@fl_mkelly_r400_win_laptop
Update comment in _11
Copy \_11 to \_12 and use 144 vertices per packet
Update test list and tracker accordingly.
Change 116617 on 2003/08/14 by csampayo@fl_csampayo_r400
Renamend sheetl, updated schedule
Change 116407 on 2003/08/13 by jasif@jasif r400 win tor
Made some additions. Will add some more tomorrow.
Change 116385 on 2003/08/13 by ygiang@ygiang_r400_win_marlboro_p4
updated:pv results
Change 116378 on 2003/08/13 by ygiang@ygiang_r400_win_marlboro_p4
updated: performance excel sheets
Change 116369 on 2003/08/13 by frising@frising r400 win marlboro
no changes, just a test.
```

```
Change 116347 on 2003/08/13 by jimmylau@jimmylau_r400_win_tor
Add a section on clock muxing conditions to the R500\ BIF implementation specs.
Add a table of R500 pin and ROM straps.
Change 116338 on 2003/08/13 by jcox@FL JCOX3
Make ready to post test plan status on web
Change 116194 on 2003/08/12 by tmartin@tmartin_r400_win
added r400vc_endian_swap_01 and r400vc_endian_swap_02
Change 115764 on 2003/08/11 by ashishs@fl_ashishs_r400_win
updated
Change 115683 on 2003/08/08 by koyu@kyuCA
added cycles/inst for vertex shader and pixel shader
Change 115607 on 2003/08/08 by mkelly@fl mkelly r400 win laptop
Negative ALU VS constant clamping, negative index clamping with negative stepping
Change 115561 on 2003/08/08 by fliljero@fl_knarf
renamed references from R400 to Crayola
Change 115547 on 2003/08/08 by fliljero@fl_knarf
Removed all references to PIO/Push mode and its associated registers:
CP CSQ CNTL
CP 'RING | INDIRECT1 | INDIRECT2 | REAL TIME | IB ST | RT ST' PUSH
Change 115546 on 2003/08/08 by fliljero@fl knarf
renamed to use Crayola rather than R400
Change 115480 on 2003/08/07 by mkelly@fl_mkelly_r400_win_laptop
First test of series which checks positive alu constant index clamping.
Change 115463 on 2003/08/07 by fliljero@fl knarf
Baseline for the PM4 Spec (after the start of Xenos)
```

```
Change 115462 on 2003/08/07 by fliljero@fl knarf
added note to cover to see PM4 Spec Crayola for the latest PM4 data
Change 115461 on 2003/08/07 by fliljero@fl knarf
Baseline for Crayola CP Spec (after the start of Xenos)
Change 115460 on 2003/08/07 by fliljero@fl knarf
added note on cover to see CP Spec Crayola for the latest CP data.
Change 115388 on 2003/08/07 by ashishs@fl ashishs r400 win2
updating the tracker for all the tests added in last week and current week
Change 115373 on 2003/08/07 by csampayo@fl_csampayo_r400
Updated status for the test r400sx vtx export full sequential 01
Change 115276 on 2003/08/06 by jhoule@jhoule doc lt
Changed the weights to give less pointy tents.
This forces a mutliplier instead of a shifter, but quality is deemed important enough
to warrant those.
Change 115225 on 2003/08/06 by jhoule@jhoule_doc_lt
Document describing the new HiColor accumulation scheme
Change 115185 on 2003/08/06 by kevino@kevino_r400_win_marlboro
Updated document to reflect what is in RTL code for tca regs
Change 115176 on 2003/08/06 by mzhu@mzhu crayola win tor
Add 3.4.9.21 for the cases right edge of icon/cursor is aligned with right edge of
graphics window.
Change 115166 on 2003/08/06 by koyu@kyuCA
added new fields for SO
Change 115088 on 2003/08/05 by jimmylau@jimmylau_r400_win_tor
rename scan ports from *BIF_* to *BIF_TOP_*
Change 114954 on 2003/08/05 by mkelly@fl mkelly r400 win laptop
```

```
Add 3 simple tests
```

Change 114824 on 2003/08/04 by alleng@alleng_r400_win_marlboro_8200

Fixed hyperlinks

Change 114814 on 2003/08/04 by alleng@alleng_r400_win_marlboro_8200

Updates...

Change 114724 on 2003/08/04 by llefebvr@llefebvr_r400_montreal

Corrected the max number for mem exports to be 5 instead of 9.

Change 114564 on 2003/08/01 by aashkar@aashkar2_crayola_win

Updated Spec with the addition of bit 19 in the interrupt registers for the software interrupt (SW INT). This interrupt is moving to the CP from the MH.

Change 114555 on 2003/08/01 by tmartin@tmartin r400 win

fixed the total test count because some tests were left out

Change 114550 on 2003/08/01 by tmartin@tmartin r400 win

added r400vc_fetch_mode_01 and r400vc_fetch_mode_02

Change 114343 on 2003/07/31 by csampayo@fl_csampayo_r400

Add memory export test, update test list and tracker

Change 114314 on 2003/07/31 by kryan@kryan r400 win marlboro DOCS

Update with latest changes to Shader Assembler

- Update CUBE Vector ALU operation opcode syntax to take two source operands.
- VFETCH instruction modifications
 - . Update offset field in VFETCH instruction to be 23 bit signed value instead of unsigned 8 bits from previous definition.

```
. Modified syntax to add FETCH_TYPE (MEGA/MINI) and COUNT
      optional fields from Vfetch instruction.
Change 114266 on 2003/07/31 by tmartin@tmartin r400 win
added r400vc addr spanning 01
Change 114220 on 2003/07/31 by jiezhou@jiezhou_r400_win
add description of fcp clock
Change 114162 on 2003/07/31 by alleng@alleng_r400_win_marlboro_8200
Run with updated hw
Change 114063 on 2003/07/30 by tmartin@tmartin_r400_win
moved the section of the clamping test
Change 114059 on 2003/07/30 by jhoule@jhoule doc lt
Hardcoded weights for anisotropy fix (not yet official).
Change 114044 on 2003/07/30 by csampayo@fl_csampayo_r400
Updated description of section 1.2.7
Change 114018 on 2003/07/30 by tmartin@tmartin_r400_win
added strides/offsets tests
Change 113992 on 2003/07/30 by csampayo@fl csampayo r400
Update individual requirements based on combined interaction
Change 113980 on 2003/07/30 by jimmylau@jimmylau r400 win tor
Remove ROM_strap_vcoref & ROM_strap_calref from the interface with strap block because
they are shared with ROM_strap_pad_rx_manual_impedance &
ROM_strap_pad_tx_manual_impedance.
Add ROM strap B PRX LBACK EN, which shares with bit 0 of ROM strap PAD CURRENT
Change 113956 on 2003/07/30 by jiezhou@jiezhou_r400\_win
```

```
Initial release
Change 113883 on 2003/07/29 by alleng@alleng_r400_win_marlboro_8200
Included initial idle and busy counts.
Rearranged a bit...
Change 113792 on 2003/07/29 by csampayo@fl_csampayo_r400
Adjusted block schedules as per latest plan
Change 113761 on 2003/07/29 by mzhu@mzhu_crayola_win_tor
Test data clamping in test case 3 for fix point alpha format in 3.4.9.18 64bpp graphics
with graphics and overlay alpha blending mode 1
Change 113507 on 2003/07/28 by csampayo@fl_csampayo_r400
Some housekeeping
Change 113483 on 2003/07/28 by ashishs@fl ashishs r400 win
updated
Change 113282 on 2003/07/25 by csampayo@fl csampayo r400
Updated status for tests r400sx_vtx_point_size_export_01-04 and added them to test_list
Change 113280 on 2003/07/25 by jayw@ma_jayw_lt
Working document for register read allocation across RB and DBs.
Change 113262 on 2003/07/25 by tmartin@tmartin r400 win
no new tests just some updates
Change 113136 on 2003/07/25 by bbloemer@ma bbloemer
Updated test descriptions.
Change 113130 on 2003/07/25 by mkelly@fl_mkelly_r400_win_laptop
Update...
Change 113128 on 2003/07/25 by kevino@kevino r400 win marlboro
```

updated tables with reg addresses

```
Change 112980 on 2003/07/24 by mkelly@fl_mkelly_r400_win_laptop
Update...
Change 112914 on 2003/07/24 by alleng@alleng r400 win marlboro 8200
Bringing the R400 docs up to date and checking in pm4play.bat
Change 112872 on 2003/07/24 by tmartin@tmartin r400 win
added r400vc_base_addr_range_pci_01
Change 112683 on 2003/07/23 by chwang@chwang_r400_doc_win
Update.
Change 112655 on 2003/07/23 by kevino@kevino_r400_win_marlboro
Made table titles captions and updated table of tables
Change 112640 on 2003/07/23 by kevino@kevino r400 win marlboro
Added fetch gen and TCD debug tables
Change 112628 on 2003/07/23 by efong@efong r400 win tor doc
updated visio diagrams
Change 112627 on 2003/07/23 by efong@efong_r400_win_tor_doc
Updated the test_control section of the document
Change 112623 on 2003/07/23 by jowang@jowang R400 win
submit for kaleidoscope snapshot
Change 112603 on 2003/07/23 by jimmylau@jimmylau r400 win tor
Elaborate when the strap valid signals should be asserted in the ROM straps section.
Change 112518 on 2003/07/22 by tmartin@tmartin_r400_win
added r400vc_base_addr_range_agp_01
Change 112513 on 2003/07/22 by cbrennan@cbrennan r400 win marlboro
Allocated most of Ray's ports.
Added headings for more stuff to come.
```

Change 112496 on 2003/07/22 by brianf@ma_bfavela Updated performance numbers with "better" architecture Change 112470 on 2003/07/22 by paulv@MA PVELLA Fixed Table 22 to include the MH_TC_mcNsource bit. Change 112465 on 2003/07/22 by mkelly@fl mkelly r400 win laptop Update... Change 112329 on 2003/07/22 by jhoule@jhoule_doc_lt Updated notes below in order to explain the 16.2 and 32.2 precision decision. Change 112321 on 2003/07/22 by jhoule@jhoule doc lt Updated with full channel separation, meaning that the 8b can now be OR'd together to create Mid and HiColor. Change 112257 on 2003/07/21 by frising@frising r400 win marlboro 0.99n -fixed small typo in CUBE instruction comments Change 112232 on 2003/07/21 by tmartin@tmartin r400 win Added 5 tests. All test the dynamic addressing range of the VC when vertex buffers are stored in the frame buffer. Change 112229 on 2003/07/21 by cbrennan@cbrennan r400 win marlboro Add the beginnings of a TC debug registers document for review. Change 112227 on 2003/07/21 by enewman@enewman r400 linux marlboro fixed port matcher command line switches and p4 label command line switches Change 112113 on 2003/07/21 by rthambim@rthambim_r400_win_tor Modified top level diagram and added comments.

Change 112100 on 2003/07/21 by frising@frising r400 win marlboro

-remove per-quad value for USE REG LOD since we can do it per-pixel full speed. Note

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```
that value 1 is now the only 'Yes'.
Change 112085 on 2003/07/21 by jyarasca@jyarasca_r400_win_cvd
Updated times
Change 112078 on 2003/07/21 by jimmylau@jimmylau r400 win tor
Updates on sections about slave interface changes and ROM strap location table, after
specs review.
Change 112077 on 2003/07/21 by jasif@jasif r400 win tor
Updated schedules for simulation regressions.
Change 111975 on 2003/07/18 by csampayo@fl csampayo r400
Adding point size export mode test. Updated test list and test tracker accordingly.
Change 111957 on 2003/07/18 by frising@frising_r400_win_marlboro
v.1.74
-Give a real explanation of how FMT 1 REVERSE differs from FMT 1
Change 111949 on 2003/07/18 by frising@frising r400 win marlboro
v.0.99m
-fix MAX4 instruction. Had comparision order backwards.
Change 111666 on 2003/07/17 by jimmylau@jimmylau_r400_win_tor
Minor changes to fix typos and to reword some paragraphs slightly.
Change 111558 on 2003/07/16 by jimmylau@jimmylau r400 win tor
Initial Revision
Change 111554 on 2003/07/16 by csampayo@fl_csampayo_r400
Some housekeeping
Change 111517 on 2003/07/16 by lseiler@lseiler_r400_win_marlboro
Minor fixes, additional test routines
Change 111482 on 2003/07/16 by tmartin@tmartin r400 win
added r400vc addr alignment 01
```

```
Change 111413 on 2003/07/16 by smburu@smburu_r400_win_marlboro
tp_ch_blend update.
Change 111386 on 2003/07/16 by frising@frising_r400_win_marlboro
v.0.991
-add scalar sin and cos instructions
Change 111385 on 2003/07/16 by frising@frising_r400_win_marlboro
v.1.99
-add scalar sin and cos instructions
Change 111285 on 2003/07/15 by gregs@gregs r400 win marlboro
typo in a signal name - corrected
Change 111281 on 2003/07/15 by brianf@ma_bfavela
More changes
Change 111229 on 2003/07/15 by brianf@ma_bfavela
Updated summary to include MH.
Change 111206 on 2003/07/15 by alleng@alleng r400 win marlboro 8200
Added a couple more tidbits regarding capture
Change 111200 on 2003/07/15 by brianf@ma bfavela
Fixed hyperlinks
Change 111187 on 2003/07/15 by ashishs@fl_ashishs_r400_win
updated test tracker
Change 111168 on 2003/07/15 by paulv@MA_PVELLA
Updates concerning the MHS.
Change 111147 on 2003/07/15 by ashishs@fl_ashishs_r400_win
updated tracker
Change 111109 on 2003/07/15 by brianf@ma bfavela
```

```
More performance updates
Change 111030 on 2003/07/14 by alleng@alleng_r400_win_marlboro_8200
Added more data to the results tab...
Change 110917 on 2003/07/14 by mzhu@mzhu_crayola_win_tor
Add 3.4.9.20 Multiply overlay alpha with global alpha for per pixel overlay alpha blend
mode
Change 110885 on 2003/07/14 by brianf@ma bfavela
Fixed DC so it doesn't error
Change 110883 on 2003/07/14 by brianf@ma_bfavela
Updated performance
Change 110825 on 2003/07/14 by jacarey@fl jcarey2
Fix Typo in RBBM Spec Diagram
Change 110516 on 2003/07/11 by jiezhou@jiezhou r400 win
Update PLL dividers' values
Change 110504 on 2003/07/11 by jiezhou@jiezhou\_r400\_win
update pll divider's value
Change 110337 on 2003/07/10 by vbhatia@vbhatia_r400_win_marlboro
Updated tp and vc path formatter status
Change 110255 on 2003/07/10 by lseiler@lseiler r400 win marlboro2
Minor text edits, updated pdf version
Change 110230 on 2003/07/10 by mzhu@mzhu_crayola_win_tor
Add Multiplying overlay alpha with global alpha in 11.10 Overlay Keyer. It is used for
overlay per-pixel alpha blending mode.
Change 110173 on 2003/07/10 by dglen@dglen r400
```

Deleted file

```
Superceded by R500 Display Colour Spaces.xls
Change 110159 on 2003/07/10 by dglen@dglen_r400
Spreadsheet for matrix, gamma and color conversions in R500 display path (DCP and TV
Change 109959 on 2003/07/09 by jimmylau@jimmylau_r400_win_tor
Update to the BIF slave interface specs after the review meeting
Change 109954 on 2003/07/09 by llefebvr@llefebvr r400 montreal
Fixing VC table.
Change 109817 on 2003/07/08 by rthambim@rthambim r400 win tor
Fixed naming convention.
Change 109812 on 2003/07/08 by jhoule@jhoule_doc_lt
Major change, with left-alignment instead or right shifts.
Change 109715 on 2003/07/08 by rthambim@rthambim r400 win tor
Updated the spec with review feedback.
Change 109709 on 2003/07/08 by rthambim@rthambim_r400_win_tor
updated the spec with review feedback - included ordering info to read req; modified
timing diags; added comments to unused ports.
Change 109670 on 2003/07/08 by jimmylau@jimmylau r400 win tor
Fix typo in the MH-BIF signal in the master specs
Change 109493 on 2003/07/07 by csampayo@fl csampayo r400
Some housekeeping
Change 109402 on 2003/07/06 by gregs@laptop1
Change 109352 on 2003/07/04 by jimmylau@jimmylau r400 win tor
```

Update the section on strap interface after the review meeting.

```
Change 109187 on 2003/07/03 by jowang@jowang_R400_win
Includes 30bpp for twin single and dual-link TMDS
Change 109175 on 2003/07/03 by ashishs@fl ashishs r400 win
updated test list and trackers
Change 109106 on 2003/07/03 by alleng@alleng r400 win marlboro 8200
Removed one of the RB tabs
Change 109104 on 2003/07/03 by alleng@alleng_r400_win_marlboro_8200
Added a few minor updates from Ko...
Change 109094 on 2003/07/03 by moev@moev
updates to the status of the tests.
Change 108965 on 2003/07/02 by alleng@alleng r400 win marlboro 8200
Updated with specific registry settings for capture
Change 108939 on 2003/07/02 by ashishs@fl ashishs r400 win
corrected small error with SU
Change 108933 on 2003/07/02 by ashishs@fl_ashishs_r400_win
updated the tracker to include author for CL/VTE tests so that its easy for debugging
the number of tests in each block
Change 108927 on 2003/07/02 by ashishs@fl ashishs r400 win
updated tracker to include this weeks PA tests
Change 108905 on 2003/07/02 by ygiang@ygiang_r400_win_marlboro_p4
added: Test list for Perfsuite performace tests
Change 108866 on 2003/07/02 by ashishs@fl_ashishs_r400_win
updated for some bugs
Change 108861 on 2003/07/02 by rthambim@rthambim r400 win tor
Added source/frequency information for clock signals.
```

```
Change 108824 on 2003/07/02 by jacarey@fl_jcarey_desktop
Update Min / Max functions in emulator to match hardware.
Hardware produces a 32-bit signed extended result of 16-bit comparision value.
Change 108746 on 2003/07/01 by smburu@smburu r400 win marlboro
tp hicolor update.
Change 108740 on 2003/07/01 by paulv@MA_PVELLA
Fixed a mistake about the size of the RB queue. It is 2, not 4.
Change 108736 on 2003/07/01 by smburu@smburu_r400_win_marlboro
tp_hicolor update.
Change 108702 on 2003/07/01 by alleng@alleng r400 win marlboro 8200
Added RB(C1) tab, added tests to vtx tab, et al
Change 108692 on 2003/07/01 by georgev@devel georgevh2 r400 win marlboro
Added bsub run options
Change 108680 on 2003/07/01 by jacarey@fl_jcarey_desktop
Add section documenting CP Idling before writing certain control registers.
Change 108579 on 2003/06/30 by jasif@jasif_r400_win_tor
Updated.
Change 108520 on 2003/06/30 by ashishs@fl ashishs r400 win
updated the tracker
Change 108516 on 2003/06/30 by frising@frising r400 win marlboro
v.0.99k
-remove references to R400_TP_NAN
Change 108514 on 2003/06/30 by gregs@gregs_r400_win_marlboro
Change 108418 on 2003/06/27 by jiezhou@jiezhou r400 win
```

```
major updating for DC split
Change 108407 on 2003/06/27 by frising@frising_r400_win_marlboro
-fixed small typo, no version bump
Change 108406 on 2003/06/27 by frising@frising_r400_win_marlboro
v.1.73
-Add FMT_32_32_32_FLOAT vertex only format
-remove fast float stuff
-remove TP NAN support
Change 108359 on 2003/06/27 by gregs@gregs_r400_win_marlboro
added CG_VC_pm_enb register bit
Change 108350 on 2003/06/27 by sbagshaw@sbagshaw
minor updates to contents & table of contents
Change 108338 on 2003/06/27 by frising@frising r400 win marlboro
v.1.98
-show scalar instructions {\tt SUB\_CONST\_0} and {\tt SUB\_CONST\_1} as negated adds to be consistent
with other subtraction instructions.
Change 108325 on 2003/06/27 by frising@frising_r400_win_marlboro
v.0.99j
-misc updates and clean-up
Change 108322 on 2003/06/27 by rthambim@rthambim r400 win tor
Initial revision for R500.
Change 108317 on 2003/06/27 by brianf@ma_bfavela
MCMH Performance Spreadsheet
Change 108311 on 2003/06/27 by rthambim@rthambim_r400_win_tor
Added pci-express changes. Initial revision for R500.
Change 108284 on 2003/06/27 by gregs@gregs r400 win marlboro
fixed bug in PMESTBCLY macro
```

```
Change 108282 on 2003/06/27 by jiezhou@jiezhou_r400_win
add pclk as a slave mode for one-shot debug control
Change 108273 on 2003/06/27 by jimmylau@jimmylau_r400_win_tor
Update BIF slave interface specs for R500.
Change 108167 on 2003/06/26 by vbhatia@vbhatia r400 win marlboro
Update status for addresser and formatter
Change 108103 on 2003/06/26 by sbagshaw@sbagshaw
Programming Guide updated for R500.
Includes information on the Scaler
Change 107862 on 2003/06/25 by smburu@smburu_r400_win_marlboro
tp hicolor update.
Change 107724 on 2003/06/24 by csampayo@fl csampayo r400
Add footer (this time saved update)
Change 107722 on 2003/06/24 by csampayo@fl_csampayo_r400
Added footer
Change 107709 on 2003/06/24 by frising@frising_r400_win_marlboro
0.99i
-fix typos with set* scalar instructions
-document correct behavior with not equal predicate instructions and NaNs
Change 107687 on 2003/06/24 by frising@frising r400 win marlboro
0.99h
-add cube instruction updates (two operand, etc)
Change 107637 on 2003/06/24 by moev@moev
update to current state of testing
Change 107634 on 2003/06/24 by bbuchner@fl bbuchner r400 win
updated slides
```

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Change 107630 on 2003/06/24 by frising@frising_r400_win_marlboro
v.1.97
-update cube instruction to take two operands. Output produced in a different order
Change 107622 on 2003/06/24 by smburu@smburu_r400_win_marlboro
hicolor status update.
Change 107617 on 2003/06/24 by georgev@devel_georgevh2_r400_win_marlboro
Added "nodump" message to instructions.
Change 107537 on 2003/06/23 by georgev@devel georgevh2 r400 win marlboro
Added new way of doing things.
Change 107536 on 2003/06/23 by bbuchner@fl_bbuchner_r400_win
added review
updated block diagram of cache
Change 107479 on 2003/06/23 by bbuchner@fl bbuchner r400 win
added RP block diagrams for L1 and L2 request processing
Change 107419 on 2003/06/23 by ashishs@fl_ashishs_r400_win
updating trackers and test_list
Change 107282 on 2003/06/20 by moev@moev
Status as of 6/20/03
Change 107253 on 2003/06/20 by llefebvr@llefebvr r400 montreal
Backup, no major changes.
Change 107197 on 2003/06/20 by vbhatia@vbhatia_r400_win_marlboro
Status update for formatter
Change 107080 on 2003/06/19 by bbuchner@fl bbuchner r400 win
```

ADDed MI block diagram and description. Minor fixes.

```
Change 106800 on 2003/06/18 by mkelly@fl_mkelly_r400_win_laptop
First VC test documented...
Change 106777 on 2003/06/18 by smburu@smburu r400 win marlboro
tp hicolor status update.
Change 106696 on 2003/06/18 by smburu@smburu r400 win marlboro
Update of tp_hicolor tests.
Change 106645 on 2003/06/17 by csampayo@fl_csampayo_r400
Updated FC column to contain selected test counter
Change 106643 on 2003/06/17 by csampayo@fl_csampayo_r400
Added full chip column
Change 106642 on 2003/06/17 by csampayo@fl csampayo r400
Updated schedule, added full chip column
Change 106640 on 2003/06/17 by csampayo@fl csampayo r400
Added full chip column
Change 106634 on 2003/06/17 by csampayo@fl_csampayo_r400
Updated schedule, added full chip column
Change 106631 on 2003/06/17 by csampayo@fl_csampayo_r400
Updated schedule, added full chip column
Change 106623 on 2003/06/17 by georgev@devel georgevh2 r400 win marlboro
Added changes from TP meeting.
Change 106525 on 2003/06/17 by csampayo@fl_csampayo_r400
Update header
Change 106524 on 2003/06/17 by csampayo@fl csampayo r400
Update header
```

```
Change 106523 on 2003/06/17 by csampayo@fl_csampayo_r400
Update header take 2
Change 106521 on 2003/06/17 by csampayo@fl_csampayo_r400
Header update
Change 106519 on 2003/06/17 by csampayo@fl csampayo r400
Header update
Change 106516 on 2003/06/17 by csampayo@fl_csampayo_r400
Some housekeeping
Change 106509 on 2003/06/17 by csampayo@fl_csampayo_r400
Some housekeeping
Change 106493 on 2003/06/17 by csampayo@fl csampayo r400
Some housekeeping
Change 106436 on 2003/06/16 by ashishs@fl ashishs r400 win
minor updates
Change 106410 on 2003/06/16 by alleng@alleng_r400_win_marlboro_8200
Updates to standalone playback info
Change 106395 on 2003/06/16 by jasif@jasif\_r400\_win\_tor
DAC Report.
Change 106329 on 2003/06/16 by alleng@alleng r400 win marlboro 8200
Initial submission
Change 106294 on 2003/06/16 by ashishs@fl_ashishs_r400\_win
updated
Change 106291 on 2003/06/16 by ashishs@fl_ashishs_r400_win
updated
```

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Change 105958 on 2003/06/12 by vbhatia@vbhatia_r400_win_marlboro
Updated weekly regression status for deriv and aniso
Change 105882 on 2003/06/12 by jbrady@jbrady r400 win
Remove border color, add thread type.
Change 105862 on 2003/06/12 by jbrady@jbrady r400 win
Update to reflect current vcrg partitioning.
Added clamp module.
Change 105849 on 2003/06/12 by ashishs@fl_ashishs_r400\_win
adding place holder for some of the tests that will be planned for later
Change 105838 on 2003/06/12 by ashishs@fl ashishs r400 win
added 2 bugs that were currently found in SQ waterfalling
Change 105834 on 2003/06/12 by alleng@alleng r400 win marlboro 8200
Added miscellaneous test, added results column for a couple of sheets
Change 105776 on 2003/06/12 by smburu@smburu r400 win marlboro
tp hicolor status.
Change 105768 on 2003/06/12 by sbagshaw@sbagshaw
Presentation for R500 DCDO Debug bus included.
Changes started to R400 Debug Bus specification document to describe changes to debug
required for DC/DO split.
Change 105676 on 2003/06/11 by csampayo@fl_csampayo_r400
Update tests reqs and to include more functionality
Change 105633 on 2003/06/11 by jowang@jowang_R400_win
programming guide: bypass mode only
Change 105615 on 2003/06/11 by beiwang@bei_pc
Added items left from line coverage.
Change 105476 on 2003/06/10 by csampayo@fl csampayo r400
```

```
Initial check in
Change 105436 on 2003/06/10 by bbuchner@fl_bbuchner_r400_win
removed null request from L2A FIFO when clamping is true
Change 105426 on 2003/06/10 by bbuchner@fl_bbuchner_r400_win
updated all external I/O
modified clamping
Change 105407 on 2003/06/10 by georgev@devel_georgevh2_r400_win_marlboro
Added things to check test descriptions.
Change 105349 on 2003/06/10 by ygiang@ygiang_r400_win_marlboro_p4
added: excel perf results template
Change 105347 on 2003/06/10 by mzhu@mzhu crayola win tor
Add 3.4.9.19 data clamping in LUT PWL mode
Change 105335 on 2003/06/10 by ygiang@ygiang r400 win marlboro p4
testing auto update for web
Change 105333 on 2003/06/10 by ygiang@ygiang_r400\_win\_marlboro\_p4
removed auto update
Change 105310 on 2003/06/10 by moev@moev
Updated tested blocks
Change 105299 on 2003/06/10 by ygiang@ygiang r400 win marlboro p4
updated:pv Xsheet
Change 105286 on 2003/06/10 by pmitchel@pmitchel_entire_depot_win
moving results to doc_lib/pv_results
Change 105058 on 2003/06/09 by csampayo@fl csampayo r400
Updated header. Some housekeeping
```

Change 105039 on 2003/06/09 by ashishs@fl ashishs r400 win updated Change 105017 on 2003/06/09 by mzhu@mzhu crayola win tor Update clamping and rounding for PWL LUT mode in 11.8 Change 104949 on 2003/06/09 by mzhu@mzhu crayola win tor Update floating point LUT fill pattern in 3.4.4. Change 104946 on 2003/06/09 by bbloemer@ma bbloemer Updated test descriptions. Change 104736 on 2003/06/06 by $ashishs@fl_ashishs_r400_win$ updated the tracker and test_list for the newly added 4 tests Change 104633 on 2003/06/06 by jacarey@fl jcarey desktop Document resetting of read registers to zero on reset. Change 104629 on 2003/06/06 by paulv@MA PVELLA Updates to the MHS. Change 104557 on 2003/06/06 by efong@efong_r400_win_tor_doc Updated Linux machines assignments Change 104473 on 2003/06/05 by jowang@jowang R400 win added/modified after test plan review Change 104460 on 2003/06/05 by vbhatia@vbhatia r400 win marlboro Update LodDeriv and LodAniso status of 06/05/03 Also added latest tcd status as mentioned by Kevin O. Change 104347 on 2003/06/05 by ygiang@ygiang_r400_win_marlboro_p4 relocating files Change 104338 on 2003/06/05 by moev@moev changed WSO connectivity to WSO P

```
Change 104330 on 2003/06/05 by ygiang@ygiang_r400_win_marlboro_p4
fixed:link
Change 104325 on 2003/06/05 by ygiang@ygiang_r400_win_marlboro_p4
added: performance excel sheets to perforce
Change 104324 on 2003/06/05 by jacarey@fl jcarey desktop
Reset VS & PS De-alloc fifos when ME overwrites the *_Avail_Count counters
Change 104320 on 2003/06/05 by smburu@smburu_r400_win_marlboro
Updated status fot tp hicolor.
Change 104298 on 2003/06/05 by kcorrell@kcorrell r400 docs marlboro nb
documented change in DC tag definition - increased request sequence field
Change 104273 on 2003/06/05 by jmarsano@MA JMARSANO
Added ATPG and DBIST sections
Change 104244 on 2003/06/05 by mzhu@mzhu_crayola_win_tor
Update alpha pattern in 3.4.9.18
Change 104156 on 2003/06/04 by ashishs@fl_ashishs_r400_win
updated the tracker
Change 104154 on 2003/06/04 by bbuchner@fl bbuchner r400 win
updated L1 and L2 request fifo contents
Change 104036 on 2003/06/04 by rfevreau@rfevreau_r400_win
Updates
Change 104014 on 2003/06/04 by jacarey@fl_jcarey_desktop
Documentation for new debug bit in the CP.
Change 103838 on 2003/06/03 by mzhu@mzhu crayola win tor
Rename 2 LUT modes: 256-entry table mode and piece wise linear mode
```

Add clamping and rounding for PWL LUT mode Change 103836 on 2003/06/03 by mzhu@mzhu_crayola_win_tor Rename 2 LUT modes: 256-entry table mode and piece wise linear mode Change 103818 on 2003/06/03 by jhoule@jhoule doc lt Updated RF expand table. Negative indices indicate added precision (8.8 -> 7...-8, 16.8 -> 15...-8, 32.8 -> 31... 8). Change 103794 on 2003/06/03 by tien@ma spinach Added a litte bit more info Change 103783 on 2003/06/03 by tien@ma_spinach Initial Checkin Change 103568 on 2003/06/02 by mzhu@mzhu_crayola_win_tor Update 3.4.9.18 for 64bpp graphics with graphics and overlay alpha blending mode 1 (per pixel graphics alpha mode) Change 103567 on 2003/06/02 by mzhu@mzhu_crayola_win_tor Update for 64 bpp graphics bit depth and graphics/overlay blend using per-pixel alpha from graphics channel (chapter 11.9 Graphic Keyer). Change 103433 on 2003/05/30 by ashishs@fl_ashishs_r400_win updated Change 103432 on 2003/05/30 by ashishs@fl ashishs r400 win updated Change 103380 on 2003/05/30 by omesh@ma omesh Mostly complete spreadsheet. What is missing is: 1) Tests yet to be written: HiC and RB Register Read tests. 2) The correct test writer information for some of the tests. 3) Filenames and testcases for some of Frank Hsien's tests. However, I believe the counts are accurate of the existing tests.

Change 103349 on 2003/05/30 by khabbari@khabbari2 r400 win

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Change 103343 on 2003/05/30 by gregs@gregs_r400_win_marlboro
added two signals for DC/DO debug bus connections
Change 103310 on 2003/05/30 by llefebvr@llefebvr_r400_montreal
Added comments about address register.
Change 103185 on 2003/05/29 by khabbari@khabbari2 r400 win
r500 test plan added
Change 103148 on 2003/05/29 by kmahler@kmahler r400 doc lib
Updates for Random Shader Generator
Change 103144 on 2003/05/29 by omesh@ma omesh
Made some more updates to reflect current status. Still need to update Frank Hsien and
Mark's tests into the spreadsheet, along with Hier Stencil and Hier Z tests. Other
categories to add include the ZPASS counter tests, etc.
Change 103099 on 2003/05/29 by jacarey@fl_jcarey_desktop
Added oper=comp to document.
Change 103063 on 2003/05/29 by csampayo@fl csampayo r400
Updated status for r400sq const index 03.
Change 103060 on 2003/05/29 by csampayo@fl csampayo r400
Added max constant memory addrs reg indexing test. Updated test_list and test tracker
accordingly.
Change 103041 on 2003/05/29 by ashishs@fl ashishs r400 win
updated some description as well as TBD's
Change 103035 on 2003/05/29 by ashishs@fl_ashishs_r400_win
added the r400sq_trunc_01 test bug
```

Change 103033 on 2003/05/29 by $ashishs@fl_ashishs_r400_win$

test plan updated

```
added r400sq_floor_01 test to the tracker
Change 103025 on 2003/05/29 by ashishs@fl_ashishs_r400_win
corrected the schedule. Had incorrectly put the new 7 tests under APril20 when they
were supposed to be in May25
Change 103018 on 2003/05/29 by ashishs@fl_ashishs_r400_win
added 6 new tests to the tracker
Change 102980 on 2003/05/28 by jowang@jowang R400 win
add dual-link TMDS tests (not complete)
Change 102957 on 2003/05/28 by gregs@gregs r400 win marlboro
new part
Change 102954 on 2003/05/28 by omesh@ma\_omesh
Updated atleast some more of the RB Test plan spreadsheet. WIll try to finish by
tommorow.
Change 102893 on 2003/05/28 by mdesai@MA MDESAI
Added status for week ending 5/30
Change 102744 on 2003/05/27 by jiezhou@jiezhou_r400_win
new fb divider slip test
Change 102708 on 2003/05/27 by smburu@smburu r400 win marlboro
First tp ch blend status report.
Change 102686 on 2003/05/27 by mpersaud@mpersaud r400 win tor
Rev 0.2 Mahendra Persaud
Date: May 27, 2003
Update test flow section plus other general clean up.
Change 102623 on 2003/05/26 by mpersaud@mpersaud_r400_win_tor
Added new tests for R500.
Change 102613 on 2003/05/26 by mpersaud@mpersaud\_r400\_win\_tor
```

```
Initial Rev.
Change 102612 on 2003/05/26 by rfevreau@rfevreau_r400_win
Updated with due dates
Change 102610 on 2003/05/26 by jasif@jasif r400 win tor
Updated.
Change 102608 on 2003/05/26 by chwang@chwang_r400_doc_win
Latest update.
Change 102603 on 2003/05/26 by mpersaud@mpersaud_r400_win_tor
Initial Rev.
Change 102413 on 2003/05/23 by mzhu@mzhu crayola win tor
Update 3.4.9.17 for 8K virtual desktop support
Change 102406 on 2003/05/23 by georgev@devel_georgevh2_r400_win_marlboro
Documented gnuzip feature for mcmh test bench.
Change 102376 on 2003/05/23 by enewman@enewman_r400_linux_marlboro
initial p4 submission
Change 102326 on 2003/05/23 by mdesai@MA_MDESAI
Added addresser section
Change 102323 on 2003/05/23 by imuskatb@imuskatb r400 win cnimuskatb
   updated for R500
Change 102292 on 2003/05/23 by mzhu@mzhu crayola win tor
Add GRPH/OVL_SURFACE_OFFSET programming in 3.4.9.17 for 8K virtual desktop support
Change 102205 on 2003/05/22 by mzhu@mzhu_crayola_win_tor
Add 3.4.9.17 for 8K virtual desktop support
Add 3.4.9.18 for 64bpp graphics with graphics and overlay alpha blending mode 1 (per
pixel graphics alpha mode)
```

```
Change 102146 on 2003/05/22 by mkelly@fl mkelly r400 win laptop
Final, 4 textures on an RT rectangle...
Change 102113 on 2003/05/22 by rfevreau@rfevreau r400 win
Updates
Change 102018 on 2003/05/21 by csampayo@fl csampayo r400
Updated test description, test_list and test tracker
Change 102016 on 2003/05/21 by mzhu@mzhu crayola win tor
Add support for 64 bpp graphics bit depth and graphics/overlay blend using per-pixel
alpha from graphics channel (chapter 11.9 Graphic Keyer).
Increase GRPH/OVL_X/Y_END from 13 bits to 14 bits to support 8K virtual desktop
Change 102014 on 2003/05/21 by mzhu@mzhu crayola win tor
Increase GRPH/OVL X END registers from 13 bits to 14 bits to support 8K virtual desktop
Add registers DxGRPH 16BIT ALPHA MODE and DxGRPH 16BIT FIXED ALPHA RANGE for 64 bpp
graphics bit depth and graphics/overlay blend using per-pixel alpha from graphics
channel.
Change 102004 on 2003/05/21 by vbhatia@vbhatia r400 win marlboro
TP/TC Standalone testbenches weekly progress spreadsheet.
Change 101984 on 2003/05/21 by llefebvr@llefebvre laptop r400
more precisions on XYST generated register.
Change 101957 on 2003/05/21 by khabbari@khabbari2 r400 win
r500 changes
Change 101939 on 2003/05/21 by bbuchner@fl_bbuchner_r400_win
cleaned up interface names
added 8 Dword L1 changes
Change 101923 on 2003/05/21 by jacarey@fl_jcarey_desktop
Clarification that Isync flushing occurs only before the first "draw" packet after the
transition.
```

Change 101917 on 2003/05/21 by mzhu@mzhu crayola win tor

```
Add a new test (test 28) in chapter 3.4.8.4 for the case moving cursor hot spot from
outside of cursor image size to inside and only capture the second frame.
Change 101892 on 2003/05/21 by imuskatb@imuskatb r400 win cnimuskatb
updated R500DVwork.xls
Change 101800 on 2003/05/20 by jacarey@fl jcarey desktop
Correction to Gradfill prim type for rectangles.
Change 101688 on 2003/05/19 by csampayo@fl csampayo r400
Added bug# 116
Change 101680 on 2003/05/19 by llefebvr@llefebvre_laptop_r400
added arbiter to TP/VC output control flow machines.
Change 101645 on 2003/05/19 by mmantor@FL mmantorLT r400 win
minor changes to the sq vc interface drawing.
Change 101630 on 2003/05/19 by ashishs@fl ashishs r400 win
updated for the new perspective tests added...
Change 101625 on 2003/05/19 by jacarey@fl_jcarey_desktop
Miscellaneous Corrections to documents w.r.t. 2D Coherency Rectangle Updates.
Change 101602 on 2003/05/19 by bbuchner@fl bbuchner r400 win
added clamping logic
Change 101476 on 2003/05/17 by gregs@gregs r400 win cc
memory interface changes
Change 101380 on 2003/05/16 by jacarey@fl_jcarey_desktop
Clarifications to pre-write-timer and pre-write-limit usage.
Change 101350 on 2003/05/16 by bbuchner@fl bbuchner r400 win
update L2 drawing
update snoop signals
```

```
Change 101317 on 2003/05/16 by csampayo@fl_csampayo_r400
Update tests req counts
Change 101315 on 2003/05/16 by csampayo@fl_csampayo_r400
Update test req counts
Change 101307 on 2003/05/16 by csampayo@fl csampayo r400
Initial check-in
Change 101304 on 2003/05/16 by bbuchner@fl_bbuchner_r400_win
fixed L2 raddr and waddr signal names
Change 101278 on 2003/05/16 by mkelly@fl mkelly r400 win laptop
Update...
Change 101259 on 2003/05/15 by ashishs@fl ashishs r400 win
updated for r400sq_trunc_01
Change 101256 on 2003/05/15 by csampayo@fl_csampayo_r400
Updated status for test r400sq_pressure_context_combo_01
Change 101247 on 2003/05/15 by gabarca@gabarca_crayola_win_cvd
Added clear to the new interface
Change 101236 on 2003/05/15 by jasif@jasif r400 win tor
Updated.
Change 101225 on 2003/05/15 by bbuchner@fl_bbuchner_r400_win
Added C1 changes, modifications to drawings.
Describe the RG index processor
add L1 drawing
add clamping interface
Change 101205 on 2003/05/15 by gregs@gregs\_r400\_win\_marlboro
update
```

```
Change 101188 on 2003/05/15 by mkelly@fl_mkelly_r400_win_laptop
Update...
Change 101155 on 2003/05/15 by ashishs@fl ashishs r400 win
labeled myself in the owner column of some tests
Change 101137 on 2003/05/15 by csampayo@fl csampayo r400
Updated test status for tests:
r400sq_auto_wrapping_memories_01
r400sq_vs_memory_wrap_01
Sorted test list
Change 101040 on 2003/05/14 by jasif@jasif_r400_win_tor
Added section on random delays
Change 101037 on 2003/05/14 by llefebvr@llefebvr_r400_montreal
Fixing the spec some more to match R500. Added some diagrams (SQ internals)
Change 101033 on 2003/05/14 by chwang@chwang_r400_doc_win
Formatting update.
Change 100995 on 2003/05/14 by jasif@jasif r400 win tor
Updated state diagrams and errors that the model will print.
Change 100993 on 2003/05/14 by chwang@chwang r400 doc win
TMDS update spec.
Change 100991 on 2003/05/14 by chwang@chwang_r400_doc_win
Updated.
Change 100975 on 2003/05/14 by ashishs@fl_ashishs_r400_win
updated the tracker and test_list
Change 100964 on 2003/05/14 by mkelly@fl_mkelly_r400_win_laptop
Update...
Change 100945 on 2003/05/14 by jacarey@fl jcarey desktop
```

```
Clarifications to Set_Constant and LCC packets w.r.t. write enables for each CONST_ID
type.
Change 100888 on 2003/05/14 by mkelly@fl mkelly r400 win laptop
Update...
Change 100832 on 2003/05/13 by jasif@jasif r400 win tor
Updated request state machine diagram.
Change 100802 on 2003/05/13 by jasif@jasif_r400_win tor
Expanded forcible signals section.
Change 100704 on 2003/05/13 by frising@frising_r400_win_marlboro
v.1.72
-GRAD_EXP_ADJUST_H|V only exists in texture constant now.
-SetFIlter4Weights marked as not supported on r400
-Add 1024 bit option to REQUEST SIZE for C1
Change 100627 on 2003/05/13 by kcorrell@kcorrell_r400_docs_marlboro_nb
Fixed info field width and vc field width in TC/MH interface tables
Change 100583 on 2003/05/12 by gabarca@gabarca crayola win cvd
R500 interface changes
Change 100549 on 2003/05/12 by jacarey@fl jcarey desktop
Microcode Update for 2D surface coherency
Change 100274 on 2003/05/09 by jowang@jowang R400 win
updated hot-plug detection logic to support dual-link
Change 100246 on 2003/05/09 by ashishs@fl_ashishs_r400_win
updated the excel tracker sheet and the test_list up-to-date
Change 100222 on 2003/05/09 by gregs@gregs_r400_win_marlboro
update
Change 100163 on 2003/05/09 by rramsey@RRAMSEY P4 r400 win
```

drawing to describe instruction store address wrapping in the control_flow_seq and target_instr_fetch blocks Change 100159 on 2003/05/09 by jacarey@fl jcarey desktop Document setting of bit 20 in 2D Booleans as Default Sel Change 100132 on 2003/05/09 by alleng@alleng r400 win marlboro 8200 Updated these two files with new information Change 100004 on 2003/05/08 by llefebvr@llefebvr r400 montreal Some interface updates. Change 99995 on 2003/05/08 by $mkelly@fl_mkelly_r400_win_laptop$ Checkpoint... Change 99985 on 2003/05/08 by lseiler@lseiler r400 win marlboro2 New 2D tiling formats Change 99957 on 2003/05/08 by lseiler@lseiler r400 win marlboro2 Update HierStencil description Change 99927 on 2003/05/08 by moev@moev Virage Star Memory System verification test plan (block level) Change 99921 on 2003/05/08 by jmarsano@MA JMARSANO Added SAMPLE instruction to list Change 99916 on 2003/05/08 by bbuchner@fl bbuchner r400 win added L1/L2 request processing description updated for 512 bit wide cache updated external interface signals Change 99909 on 2003/05/08 by mkelly@fl_mkelly_r400_win_laptop Update with some more useful info on control flow looping... Change 99782 on 2003/05/07 by $mdoggett@mdoggett_r400_win_platypus$

```
Format 22, 23 moved to 32BPP in format conversion table.
Interlace selection bit changed from Z0 to C0.
Format 40 moved with Format 11 and 12 in format conversion table.
SM4 removed.
Completed updates to R500 version of TC.
Many unlisted changes.
Change 99777 on 2003/05/07 by frising@frising_r400_win_marlboro
v.1.96
-update rules for masking with Color/Fog export.
Change 99536 on 2003/05/07 by csampayo@fl csampayo r400
Updated tests status
Change 99510 on 2003/05/07 by jacarey@fl_jcarey_desktop
Updates to document for usage of "flush done" flag in the microcode.
Change 99502 on 2003/05/07 by jmarsano@MA JMARSANO
TST validation documents
Change 99471 on 2003/05/06 by csampayo@fl csampayo r400
Initial check-in
Change 99456 on 2003/05/06 by ashishs@fl_ashishs_r400_win
removed the modules from the excel sheet
Change 99452 on 2003/05/06 by frising@frising r400 win marlboro
-Update spec to show that masking of exports is allowed for all exports now (possible
only exception fog - TBD).
Change 99445 on 2003/05/06 by ashishs@fl ashishs r400 win
removing the button from the sheet, since it wasn't enabled
Change 99433 on 2003/05/06 by csampayo@fl_csampayo_r400
Some housekeeping
```

Change 99386 on 2003/05/06 by jacarey@fl_jcarey_desktop

```
Update
Change 99385 on 2003/05/06 by mkelly@fl_mkelly_r400_win_laptop
Update comments, new tests checking RT Constant indexing...
Change 99380 on 2003/05/06 by jacarey@fl jcarey desktop
Fix for 2D Coherency (Flushing TC)
Change 99190 on 2003/05/05 by gregs@gregs_r400_win_marlboro
update
Change 99076 on 2003/05/05 by kcorrell@kcorrell_r400_docs_marlboro_nb
First update for R500. Includes changes to AIC and TC interface for R500 feature
support.
Change 99068 on 2003/05/05 by mkelly@fl_mkelly_r400\_win_laptop
SQ RT constants and flow control testing
Change 98890 on 2003/05/02 by gregs@gregs_r400_win_marlboro
names changes again ..
Change 98760 on 2003/05/02 by llefebvr@llefebvr r400 montreal
forgot to remove 1 waterfall signal.
Change 98670 on 2003/05/01 by jbrady@jbrady r400 win
Add signals to SQ interface for flow control, count lo, fetch type. Add L1 request
signal first_instr_of_vv.
Change 98628 on 2003/05/01 by frising@frising r400 win marlboro
0.99q
-fixed typo in float16<->float32 conversion table
Change 98626 on 2003/05/01 by mkelly@fl_mkelly_r400_win_laptop
Update...
Change 98544 on 2003/05/01 by mkelly@fl mkelly r400 win laptop
Added detail on loop
```

```
Change 98539 on 2003/05/01 by kmahler@kmahler_r400_doc_lib
Some minor updates.
Change 98518 on 2003/05/01 by enewman@enewman_r400_linux_marlboro
fixed typos, cleaned up some stuff
Change 98500 on 2003/05/01 by llefebvr@llefebvr r400 montreal
Refreshing the interfaces per Andi's last mail.
Change 98409 on 2003/04/30 by gregs@gregs_r400_win_marlboro
update
Change 98401 on 2003/04/30 by llefebvr@llefebvr r400 montreal
Updated the SQ->SP interfaces for the R500.
Change 98394 on 2003/04/30 by bbloemer@ma bbloemer
Updated description of DRAM software command unit.
Change 98305 on 2003/04/30 by moev@moev
Updated Tile Enable control register to match verilog
Change 98296 on 2003/04/30 by jayw@ma_jayw_lt
minor updates
Change 98285 on 2003/04/30 by fliljero@fl frank
latest updates
Change 98162 on 2003/04/29 by mkelly@fl_mkelly_r400_win_laptop
Maximum pixel shader nested, control flow subroutines in RTS, with
non-RTS in front and back containing simple pixel and vertex shaders.
Updated SQ doc with RTS tests needed.
Change 97906 on 2003/04/28 by ashishs@fl ashishs r400 win
added a bug for the 2 failing CL tests
```

```
Change 97768 on 2003/04/25 by gregs@laptop1
all names on DC interface changed.
Change 97727 on 2003/04/25 by mzhu@mzhu crayola win tor
Update 11.2.1 DCP Window Controller for DCP DMIF SIZE
Change 97706 on 2003/04/25 by jacarey@fl jcarey desktop
Add RBBM_DB_soft_reset to RBBM
Change 97673 on 2003/04/25 by mpersaud@mpersaud_r400_win_tor
Rev 0.06 Mahendra Persaud
Date: April 25, 2003
Expanded CLIENT_DCCIF_wc?_reg_align64byte to 2 bits
Change 97672 on 2003/04/25 by mpersaud@mpersaud r400 win tor
Rev 0.02 Mahendra Persaud
Date: April 25, 2003
Updated CLIENT DCCIF reg wc? align64byte functionality.
Expanded on some block descriptions
Updated diagrams
Change 97636 on 2003/04/25 by bbuchner@fl_bbuchner_r400_win
added L2 cache drawing
fixed cache tag size (stored) to 22 bits
fixed memory request to include 26 bits of address and sec. mask
Change 97613 on 2003/04/25 by khabbari@khabbari2 r400 win
not_last_line_pair is added
Change 97525 on 2003/04/24 by lkang@lkang r400 win tor
dc split update
Change 97523 on 2003/04/24 by bbuchner@fl_bbuchner_r400_win
added top level cache controller
Change 97450 on 2003/04/24 by llefebvr@llefebvre laptop r400
Updated stall conditions.
Made swizzle changes.
```

Added more R500 specifics. Change 97441 on 2003/04/24 by mpersaud@mpersaud_r400_win_tor Rev 0.01 Mahendra Persaud Date: April 24, 2003 Initial revision. Change 97440 on 2003/04/24 by mpersaud@mpersaud r400 win tor Rev 0.05 Mahendra Persaud Date: April 24, 2003 Added CLIENT_DCCIF_wc?_reg_align64byte signal to interface. Fixed some signal descriptions and updated some of the timing diagrams Change 97403 on 2003/04/24 by jacarey@fl jcarey desktop RBBM Document Updates for DB Change 97280 on 2003/04/23 by jowang@jowang_R400_win try to update diagram so that it looks nice after rotate. didn't work. Change 97278 on 2003/04/23 by jowang@jowang R400 win modified after design review 04/23/03 Change 97277 on 2003/04/23 by jowang@jowang_R400_win updated after the design review 04/23/03 Change 97272 on 2003/04/23 by frising@frising r400 win marlboro Spazzed out on that last check-in. Should have read that 1bpp textures are filterable. No version bump. Change 97261 on 2003/04/23 by frising@frising_r400_win_marlboro v.1.71 -show that 1D textures formats are filterable -remove REQUEST LATENCY fields -misc clean-up Change 97254 on 2003/04/23 by bbuchner@fl bbuchner r400 win added Request Generator Drawing

```
Change 97181 on 2003/04/23 by bbuchner@fl_bbuchner_r400 win
0.1 of Vertex cache document
Change 97161 on 2003/04/23 by llefebvr@llefebvre laptop r400
interface name changes for the SQ->SP fetch swizzles.
Change 97140 on 2003/04/23 by csampayo@fl csampayo r400
Update using Laurent's inputs
Change 97092 on 2003/04/23 by llefebvr@llefebvre_laptop_r400
Added SP stall conditions to the SQ spec.
Change 97084 on 2003/04/23 by mpersaud@mpersaud_r400_win_tor
Rev 0.04 Mahendra Persaud
Date: April 23, 2003
Fixed some of the port names to make them more consistent.
Change 97077 on 2003/04/23 by mkelly@fl mkelly r400 win laptop
Update...
Change 97063 on 2003/04/23 by kcorrell@kcorrell_r400_docs_marlboro_nb
{\tt update \ MH\_TCn\_rtr \ signal \ description}
Change 97033 on 2003/04/22 by frising@frising_r400_win_marlboro
v.1.94
-update mova* instructions to return SrcA (like a mov) on the vector side and SrcC.W
replicated on the scalar side.
-update pred* instructions to only use W channel of operands.
-update GPR write-back table to show that scalar component is used when both scalar and
vector write masks are enabled.
Change 97032 on 2003/04/22 by frising@frising_r400_win_marlboro
v.0.99f
-misc updates/corrections/clean-up
Change 97009 on 2003/04/22 by 1chen@lchen crayola0
update
```

```
Change 96906 on 2003/04/22 by bbuchner@fl_bbuchner_r400_win
VC DOCS
Change 96888 on 2003/04/22 by jasif@jasif r400 win tor
Keep track of R500 DV work.
Change 96884 on 2003/04/22 by jasif@jasif r400 win tor
Keep track of outstanding DV work.
Change 96881 on 2003/04/22 by jiezhou@jiezhou_r400 win
dual link tmds clock
Change 96875 on 2003/04/22 by fliljero@fl_frank
changed data from one pass to the next to better insure proper validation
Change 96872 on 2003/04/22 by jiezhou@jiezhou r400 win
delete old diagram
Change 96860 on 2003/04/22 by mpersaud@mpersaud r400 win tor
New delta doc.
Updated test list.
Change 96854 on 2003/04/22 by mpersaud@mpersaud_r400_win_tor
Rev 0.03 Mahendra Persaud
Date: April 21, 2003
Update after interface review.
-general description cleanup
-update interface names
-moved surface number to address bits [5:4] during surface register write
-added functionality to rcd signal(not wired to zero anymore)
-removed client id's from read return interface.
       update timing diagrams
Change 96851 on 2003/04/22 by jacarey@fl_jcarey_desktop
1. Add detection of Type-0/1 Packets in IBs if Enabled in ME INIT Packet.
2. Unit-Level Test Added to verify.
3. Update to PM4 Spec to document addition.
```

```
Change 96715 on 2003/04/21 by jowang@jowang_R400_win
Rotate the diagram by 90 degrees for r500_tmds_dual_link.doc
Change 96713 on 2003/04/21 by jowang@jowang R400 win
updated dataSynchronizer document for R500
Change 96699 on 2003/04/21 by mkelly@fl mkelly r400 win laptop
Test all 32 RTS boolean bits in the pixel shader...
Change 96592 on 2003/04/20 by gregs@gregs r400 win cc
update
Change 96572 on 2003/04/19 by llefebvr@llefebvr_r400_montreal
Documentation changes for R500.
Change 96524 on 2003/04/18 by jhoule@jhoule doc lt
Changed GetCompTexLOD and SetTexLOD opcodes to work with a single LOD component.
Removed 1D restriction for FMT 1* formats.
Indicated that arbitrary filters are now unsupported.
Realigned every row with auto-fit to fix incomplete last lines.
Change 96500 on 2003/04/18 by fliljero@fl frank
latest updates
Change 96403 on 2003/04/18 by jacarey@fl jcarey desktop
Type 0/1 Error Checking in IBs (ME INIT, Interrupt Registers)
Un-Link Diagrams from PM4 Spec
Change 96286 on 2003/04/17 by jacarey@fl jcarey desktop
1. Add INVALID TAG to bit 31 of CP MIU TAG STAT2 register
2. Added enumeration for the perfomance counter selects in the CP and RBBM
Change 96284 on 2003/04/17 by georgev@devel_georgevh2_r400_win_marlboro
Added MCMH coverage.
Change 96130 on 2003/04/17 by mpersaud@mpersaud r400 win tor
Update port names to match R500 naming convention.
```

```
Change 96064 on 2003/04/16 by gregs@gregs_r400_win_marlboro
update
Change 95964 on 2003/04/16 by jacarey@fl_jcarey_desktop
Add new debug registers that record when read tags are outstanding to the CP.
Change 95946 on 2003/04/16 by jacarey@fl jcarey2
Removed Snooping Connections to DMA Engine from Diagram
Change 95802 on 2003/04/16 by mpersaud@mpersaud_r400_win_tor
Add to source control
Change 95773 on 2003/04/15 by jowang@jowang R400 win
First rev of dual link TMDS block diagram
Change 95760 on 2003/04/15 by sbagshaw@sbagshaw
added detail that power management for DC block must be enabled to use "one shot" clock
or clock branch stopping feature of test debug circuitry
Change 95740 on 2003/04/15 by gregs@gregs_r400_win_marlboro
update
Change 95666 on 2003/04/15 by csampayo@fl_csampayo_r400
Some housekeeping
Change 95655 on 2003/04/15 by csampayo@fl csampayo r400
Add "Owner" column
Change 95625 on 2003/04/15 by jacarey@fl jcarey2
Updates to Document
Change 95606 on 2003/04/15 by jacarey@fl_jcarey2
Baseline of Ideas for Pre-emptive Ring Hardware in CP
```

Change 95542 on 2003/04/14 by sbagshaw@sbagshaw

Changed references to PIXCLK to refer to pixel PLL source clock branch instead of a particular display controller's pixel clock branch. Changed all references of DISP1_PCLK to PIX1CLK. Changed all references of DISP2_PCLK to PIX2CLK. All prior references to "Primary display controller pixel clock" changed to "Primary pixel PLL source clock". Similarly, all prior references to "Secondary display controller pixel clock" changed to "Secondary pixel PLL source clock". Change 95512 on 2003/04/14 by jacarey@fl jcarey2 Miscellaneous Updates Change 95471 on 2003/04/14 by jacarey@fl jcarey2 Added some packet restrictions for BitBlt and HostDataBlt: For ${\tt HostData_Blt:}$ Never identify a brush even though the ROP code is set to 0xCC For BitBlt:Never do a simple BitBlt with a mono opaque source, SRC TYPE=0, or a mono transparent source, SRC_TYPE=1, and a ROP code set to source copy, 0xCC. Change 95460 on 2003/04/14 by frising@frising r400 win marlboro v.1.69 -Add fields to vertex fetch instruction to support mega/mini fetches. Change 95443 on 2003/04/14 by jasif@jasif_r400_win_tor Fixed section on integration. Change 95223 on 2003/04/11 by gregs@gregs_r400_win_marlboro update Change 95214 on 2003/04/11 by jacarey@fl jcarey2 Baseline CP Review Slides Change 95139 on 2003/04/11 by jiezhou@jiezhou r400 win for sclk_r_vga_rst Change 95109 on 2003/04/11 by mkelly@fl_mkelly_r400_win_laptop Test smallest Z offset and scale to produce a discernable difference in the Zbuffer (1 lsb).

Change 95068 on 2003/04/10 by gregs@laptop1

```
update
Change 95039 on 2003/04/10 by gabarca@gabarca_crayola_win_cvd
Fixed case c6 of crtc display parameters tests
Change 95022 on 2003/04/10 by khabbari@khabbari2_r400_win
r500 changes
Change 94731 on 2003/04/09 by rfevreau@rfevreau_r400_win
Took out dispout_gpios from block level regression
Change 94703 on 2003/04/09 by jasif@jasif r400 win tor
Updated.
Change 94683 on 2003/04/09 by jasif@jasif_r400_win_tor
Updated
Change 94680 on 2003/04/09 by jasif@jasif_r400_win_tor
Added section on managing devel and dcsplit branch.
Change 94556 on 2003/04/08 by gregs@gregs r400 win marlboro
update
Change 94544 on 2003/04/08 by rfevreau@rfevreau r400 win
Updates to xls files and Makefile
Change 94458 on 2003/04/08 by jasif@jasif_r400_win_tor
Describes how to use perforce branching mechanism for dc split changes.
Change 94419 on 2003/04/08 by jacarey@fl_jcarey2
Proposal #2 for test interface
Change 94395 on 2003/04/08 by rramsey@RRAMSEY_P4_r400_win
update
```

Change 94342 on 2003/04/07 by sbagshaw@sbagshaw

```
Added new test, "DISPOUT_INTERFACES_powerstate", to verify the Display Output data
output interfaces function properly in different power states.
Change 94201 on 2003/04/07 by jacarey@fl_jcarey2
Test Bus Proposal
Change 94195 on 2003/04/07 by ashishs@fl ashishs r400 win
closed a bug
Change 94183 on 2003/04/07 by vgoel@fl vgoel2
updated bug status
Change 94179 on 2003/04/07 by ashishs@fl_ashishs_r400_win
updated
Change 94030 on 2003/04/04 by paulv@MA PVELLA
Updates to the MHS section.
Change 93969 on 2003/04/04 by gregs@gregs r400 win marlboro
update
Change 93958 on 2003/04/04 by sbagshaw@sbagshaw
R400 DC Test Debug document put into proper documentation template. Section explaining
how to specify clock domain for each bit of DC TEST DEBUG DATA added.
Change 93888 on 2003/04/04 by jacarey@fl jcarey desktop
Updated Documentation for addition of Pre-Fetch Matching for Loop and Boolean Constants
Change 93733 on 2003/04/03 by vgoel@fl_vgoel2
closed a bug
Change 93664 on 2003/04/03 by fliljero@fl_frank
latest passing updates
Change 93520 on 2003/04/02 by jowang@jowang R400_win
no dithering done in blank pixel for DVOA
```

```
Change 93501 on 2003/04/02 by ashishs@fl_ashishs_r400_win
updated
Change 93481 on 2003/04/02 by csampayo@fl csampayo r400
Initial check-in
Change 93465 on 2003/04/02 by jacarey@fl jcarey desktop
1. Move RB_CLRCMP_MSK_HI and RB_CLRCMP_DST_HI initialization for 2D to the 2D Indirect
Buffer
2. Mask for RB_CLRCMP_MSK_LO is dependant on the pixel type
3. Updated PM4 Spec Accordingly
4. Updated CP Unit-Level Tests Accordingly
Change 93456 on 2003/04/02 by llefebvr@llefebvr r400 montreal
update to the control flow instruction.
Adding timing diagram for the SQ->VC/TP transfers.
Change 93409 on 2003/04/02 by ygiang@ygiang r400 win marlboro p4
updated sp test excel sheet
Change 93373 on 2003/04/02 by ashishs@fl_ashishs_r400_win
filed bug for SQ tests failing due to Laurent's change # 92966
Change 93269 on 2003/04/01 by gabarca@gabarca_crayola_win_cvd
fixed horz parameters cases c8, c9, still don't know why c7 does not emulate properly
Change 93211 on 2003/04/01 by paulv@MA PVELLA
Initial version.
Change 93199 on 2003/04/01 by gregs@gregs r400 win marlboro
update
Change 93176 on 2003/04/01 by gregs@gregs_r400_win_marlboro
first power estimate
```

Change 93130 on 2003/04/01 by nbarbier@nbarbier_r400_win_tor

Updated Power Management Section. Change 93121 on 2003/04/01 by vgoel@fl_vgoel2 updated to remove bug 788 Change 93110 on 2003/04/01 by jiezhou@jiezhou r400 win updating table Change 93065 on 2003/04/01 by jiezhou@jiezhou_r400_win updating in pclk src selection Change 92948 on 2003/03/31 by jiezhou@jiezhou_r400_win take debug_test out from test plan. Change 92850 on 2003/03/31 by efong@efong r400 win tor doc Added in Verdi Training docs Change 92846 on 2003/03/31 by ashishs@fl ashishs r400 win updated Change 92637 on 2003/03/28 by fliljero@fl_frank added dummy writes to instruction memory so that it does not return unknowns when read Change 92627 on 2003/03/28 by alleng@alleng_r400_win_marlboro_8200 Initial submit Change 92587 on 2003/03/28 by llefebvr@llefebvre laptop r400 added swizzle codes to the spec. Change 92433 on 2003/03/27 by mpersaud@mpersaud r400 win tor Rev 0.98 Mahendra Persaud Date: March 26, 2003 Update section 4.1 with new display parameters and formulas. Change 92425 on 2003/03/27 by jiezhou@jiezhou_r400_win

initial release

```
Change 92381 on 2003/03/27 by dwong@cndwong2
Added CP_RBBM_dma_busy to Bit 2 of the RT discrete signals
Change 92378 on 2003/03/27 by mkelly@fl mkelly r400 win laptop
Add test requirement...
Change 92370 on 2003/03/27 by jacarey@fl jcarey desktop
Fix typo in RB_BUFSZ equation in the CP_RB_CNTL register
Change 92347 on 2003/03/27 by jiezhou@jiezhou_r400_win
update
Change 92330 on 2003/03/27 by ashishs@fl_ashishs_r400_win
filed bug for the hang caused by Laurent's change #92184
Change 92325 on 2003/03/27 by kcorrell@kcorrell r400 docs marlboro nb
updated address translation diagram for rom reads, removed summary of registers in
favor of a reference to the block file
Change 92272 on 2003/03/26 by rfevreau@rfevreau r400 win
Updated numbers
Change 92265 on 2003/03/26 by jimmylau@jimmylau_r400_win_tor
Initial revision of BIF test plan.
Change 92238 on 2003/03/26 by jiezhou@cn jiezhou
updating
Change 92204 on 2003/03/26 by ashishs@fl_ashishs_r400_win
documented the SQ bug by Laurent
Change 92175 on 2003/03/26 by gregs@laptop1
reverted ROM_AP_SIZE definition
Change 92174 on 2003/03/26 by mkelly@fl mkelly r400 win laptop
Update with SC test coverage...
```

```
Change 92165 on 2003/03/26 by jacarey@fl_jcarey_desktop
Visio Updates to Scratch Register Interrupt Function in the CP
Change 92090 on 2003/03/25 by rfevreau@rfevreau r400 win
   Submitted
Change 92030 on 2003/03/25 by abeaudin@abeaudin r400 win marlboro
added build sequence
Change 91961 on 2003/03/25 by bbloemer@ma_bbloemer
Updated test plan with more test description and effort estimate.
Change 91878 on 2003/03/24 by jacarey@fl jcarey desktop
{\tt Add\ Test\_Select\ to\ R400\ documentation\ for\ the\ scratch\ register\ compare\ interrupt}
Change 91821 on 2003/03/24 by jacarey@fl jcarey desktop
Scratch Register Interrupt
Change 91812 on 2003/03/24 by mzhu@mzhu_crayola_win_tor
Double MCLK frequency to reduce MH latency to less than 40% of HTOTAL for
MH_DC_LATENCY1 test
Set SCLK to 440MHz for all MH DMIF DCP tests
Force dmif model rts delay signals to 0 on block level simulation for all {\tt MH\_DMIF\_DCP}
tests
Change 91806 on 2003/03/24 by jacarey@fl jcarey desktop
Fix typo in section 7.2
Change 91790 on 2003/03/24 by ashishs@fl_ashishs_r400_win
updated
Change 91783 on 2003/03/24 by kcorrell@kcorrell_r400_docs_marlboro_nb
Update to reflect changes to address decision tree and that primary target is now pci-
express
Change 91625 on 2003/03/21 by nbarbier@nbarbier\_r400\_win\_tor
```

```
Made additional change to tmds hpd override test.
Change 91582 on 2003/03/21 by gregs@gregs_r400_win_marlboro
various minor changes
Change 91540 on 2003/03/21 by jacarey@fl jcarey2
Scratch Compare Interrupt Diagram for R400
This is the same logic that is being added for R390 as requested
by Jeffrey Cheng. The difference from R390 is the location of the
interrupt control and status bits. This is indicated on the diagram.
Change 91514 on 2003/03/21 by abeaudin@abeaudin_r400_win_marlboro
added directory description
Change 91495 on 2003/03/21 by csampayo@fl csampayo r400
Updated status for the following tests:
r400sq flow control 02
r400sq flow control 03
Change 91489 on 2003/03/21 by csampayo@fl csampayo r400
Some housekeeping
Change 91474 on 2003/03/21 by jacarey@fl_jcarey_desktop
1. Removed PREFETCH_DISABLE_OVERRIDE from CP_DEBUG register in CP Spec.
2. Updated PFP pseudocode for Indirect Buffer and Indirect Buffer PFD packets.
Change 91438 on 2003/03/20 by csampayo@fl csampayo3
VGT output path stress tests
Change 91354 on 2003/03/20 by dwong@cndwong2
include descriptions on FDCT compression
Change 91347 on 2003/03/20 by mdoggett@mdoggett_r400_win_platypus
Major change to cache design. Partial spec update to new design.
L1 removed, L2 replaced with 4 read port 128 word memories.
Added new Set, Halfline, Slice creation in Cacheline Formats section, removed old L1
Tags.
3D 64BPP and 128BPP special cases removed.
```

Change 91332 on 2003/03/20 by jhoule@jhoule_doc_lt

Minor correction to the Numbers table.

uINT gamma'd gave values from 0 to 15, but the 'range' entry was [-8..8) instead of [0, 16).

(reported by Daniel Willhite)

No version bump.

Change 91280 on 2003/03/20 by abeaudin@abeaudin r400 win marlboro

added gfx engine description

Change 91277 on 2003/03/20 by gregs@gregs_r400_win_marlboro

iodft insertion complete

Change 91262 on 2003/03/20 by dglen@dglen r400

Updated with R500 line buffer size and core clock speed

Change 91227 on 2003/03/20 by mzhu@mzhu crayola win tor

For MH_DC_LATENCY tests in chapter 3.3, force_read_delay_busy is forced to be less than or equal to force_read_delay_idle. This makes dmif model to send overlay data not later than graphics data for the first chunk of each line

Change 91209 on 2003/03/20 by jacarey@fl jcarey desktop

- 1. Updated bit width of Non-Prefetch counters in the CP_Non_Prefetch_Cntrs register in CP Spec.
- 2. Addition of INDIRECT BUFFER PFD packet to the PM4 Spec.

Change 91124 on 2003/03/19 by gregs@laptop1

differential pads dft + clean-up

Change 90952 on 2003/03/19 by sbagshaw@sbagshaw

DMIF tests clarified to use maximum pixel clock of $400~\mathrm{MHz}$. MH-DMIF latency tests modified so some use graphics & overlay surfaces whereas others only use a graphics surface

Details and procedure for CRTC interrupt test clarified.

Change 90883 on 2003/03/19 by $mkelly@fl_mkelly_r400_win_laptop$

SC debug register coverage...

```
Change 90874 on 2003/03/19 by abeaudin@abeaudin_r400_win_marlboro
more emulator information
Change 90871 on 2003/03/19 by abeaudin@abeaudin r400 win marlboro
remove doc
Change 90870 on 2003/03/19 by abeaudin@abeaudin r400 win marlboro
new emulator emulator information
Change 90869 on 2003/03/19 by abeaudin@abeaudin_r400_win_marlboro
remove doc
Change 90785 on 2003/03/18 by sbagshaw@sbagshaw
DMIF System and Stress tests (section 3.3 and 4.3) modified to utilize real display
mode timings and clock speeds.
Change 90763 on 2003/03/18 by abeaudin@abeaudin r400 win marlboro
answers to software questions
Change 90744 on 2003/03/18 by mkelly@fl_mkelly_r400_win_laptop
Test para enable bit, update register coverage...
Change 90739 on 2003/03/18 by jacarey@fl_jcarey_desktop
Add stall conditions for IB2D init w.r.t. in-flight indirect buffer inits.
Change 90715 on 2003/03/18 by vgoel@fl vgoel2
added r400vgt_hos_pnt_adaptive_complex bug
Change 90699 on 2003/03/18 by gregs@gregs_r400_win_marlboro
DRAM_RST, TEST_YCLK, TEST_MCLK pads
Change 90670 on 2003/03/18 by mdoggett@MA MDOGGETT LT
some modifications towards version 0.5.
version 0.5 not yet completed.
Change 90659 on 2003/03/18 by mkelly@fl_mkelly_r400\_win_laptop
```

```
Update...
Change 90613 on 2003/03/17 by csampayo@fl_csampayo_r400
Control flow, predicate and multi-context and multi-prim test. Upfdated test list
accordingly
Change 90606 on 2003/03/17 by gabarca@gabarca_crayola_win_cvd
added timin lines
Change 90592 on 2003/03/17 by moev@moev
updates to include dbist
Change 90492 on 2003/03/17 by khabbari@khabbari r400 win
r400 last release
Change 90257 on 2003/03/14 by gregs@gregs\_r400\_win\_marlboro
memory strobe signals' names back to MnWDQSn and MnRQDSn
Change 90251 on 2003/03/14 by mkelly@fl_mkelly_r400_win_laptop
sc_sp centers/centroids parameters 13, 14, 15
Change 90225 on 2003/03/14 by rthambim@rthambim r400 win tor
Added pci/agp address expansion, initiator register list.
Change 90161 on 2003/03/14 by mkelly@fl mkelly r400 win laptop
sc sp sample control parameters 8 - 13
Change 90160 on 2003/03/14 by jacarey@fl_jcarey_desktop
Another Stall Condition for Indirect_Buffer packet
Change 90158 on 2003/03/14 by jacarey@fl_jcarey_desktop
Updated Pseudocode for PREFETCH DISABLE mode.
Change 90122 on 2003/03/13 by gregs@laptop1
update
```

Change 90107 on 2003/03/13 by georgev@devel georgevh2 r400 win marlboro

```
Fix _ to / typo.
Change 90102 on 2003/03/13 by georgev@devel_georgevh2_r400_win_marlboro
Updated sheets.
Change 90076 on 2003/03/13 by gregs@gregs\_r400\_win\_marlboro
update
Change 90033 on 2003/03/13 by mkelly@fl_mkelly_r400_win_laptop
sc_sp sampling through interpolators, parameters 3 - 8
Change 90005 on 2003/03/13 by jacarey@fl jcarey desktop
Updates for Prefetch-Disable Mode to Fetching Indirect Buffers
Change 89973 on 2003/03/13 by georgev@devel\_georgevh2\_r400\_win\_marlboro
First Revision.
Change 89959 on 2003/03/13 by georgev@ma_georgev
Empty for first rev.
Change 89951 on 2003/03/13 by mkelly@fl mkelly r400 win laptop
Prim type detection on gpr position 0, and 9-15
Change 89899 on 2003/03/12 by gregs@laptop1
parallel ROM supports 2 and 4Mbit parts.
Change 89876 on 2003/03/12 by jimmylau@jimmylau_r400_win_tor
Add details for the following R400 changes :
1. BIF coherency
2. 64-byte PCI and AGP writes
3. BIF performance counter
4. FW splitter that splits 128-bit data from FW to 64-bit data to HDP
5. Bug fix for AGP8x AD calibration
Change 89800 on 2003/03/12 by mkelly@fl mkelly r400 win laptop
```

Primtype detection in the pixel shader, gpr positions 2 - 8

```
Change 89764 on 2003/03/12 by gregs@laptop1
update
Change 89759 on 2003/03/12 by georgev@devel\_georgevh2\_r400\_win\_marlboro
Added some more description.
Change 89756 on 2003/03/12 by mdoggett@MA MDOGGETT LT
Minor modifications
Change 89739 on 2003/03/12 by jacarey@fl_jcarey_desktop
Update to proposal.
Change 89737 on 2003/03/12 by gregs@laptop1
strap for "rom on vip" is 0001 now.
Change 89729 on 2003/03/12 by sbagshaw@sbagshaw
Sections 3.1 and 4.1 for DCCIF tests updated with new parameters from Mahendra's
testing.
Change 89601 on 2003/03/11 by jacarey@fl_jcarey2
Proposal for Pre-Fetch Disabling
Change 89596 on 2003/03/11 by gregs@gregs_r400_win_marlboro
update
Change 89577 on 2003/03/11 by tien@ma spinach
Added extra location for SAMPLE LOCATION bit
Change 89569 on 2003/03/11 by mkelly@fl_mkelly_r400_win_laptop
Check POLY, POINT, LINE prim type detection in SP on parameter \theta
Change 89556 on 2003/03/11 by gregs@gregs_r400\_win\_marlboro
update
```

Change 89544 on 2003/03/11 by mkelly@fl_mkelly_r400_win_laptop

```
Update...
Change 89501 on 2003/03/11 by jiezhou@cn_jiezhou
update from testplan review
Change 89429 on 2003/03/10 by csampayo@fl csampayo r400
Updated VGT tests status to 100\% for all tests that pass hardware compare
Change 89424 on 2003/03/10 by csampayo@fl_csampayo_r400
Update VGT and SU sections
Change 89384 on 2003/03/10 by mkelly@fl_mkelly_r400_win_laptop
Update...
Change 89375 on 2003/03/10 by ygiang@ygiang r400 win marlboro p4
updated: sp verification spreadsheet
Change 89331 on 2003/03/10 by mkelly@fl mkelly r400 win laptop
Update...
Change 89313 on 2003/03/10 by csampayo@fl_csampayo_r400
Some housekeeping updates.
Change 89312 on 2003/03/10 by csampayo@fl_csampayo_r400
Housekeeping schedule
Change 89118 on 2003/03/07 by csampayo@fl_csampayo_r400
New test checking single/dual vertex vectors of various sizes. Updated test list and
test tracker accordingly
Change 89108 on 2003/03/07 by omesh@ma_omesh
Updated the spreadsheet to some extent, but still haven't finished....
Change 89075 on 2003/03/07 by fliljero@fl_frank
latest pass/fail results
```

Change 89066 on 2003/03/07 by moev@moev

```
r400 structure test
Change 89032 on 2003/03/07 by csampayo@fl_csampayo_r400
 \begin{tabular}{lll} Added pass-thru test with large (>64 indices) vertex vectors. & Updated test\_list and \end{tabular} 
test tracker accordingly
Change 89021 on 2003/03/07 by mkelly@fl mkelly r400 win laptop
Update...
Change 88919 on 2003/03/06 by jiezhou@cn jiezhou
update
Change 88913 on 2003/03/06 by csampayo@fl_csampayo_r400
Adding mixed VGT 2/1 output vectors tests
Change 88910 on 2003/03/06 by ashishs@fl ashishs r400 win
updated
Change 88905 on 2003/03/06 by gabarca@gabarca crayola win cvd
updated reg table adding timing calcs
Change 88847 on 2003/03/06 by jacarey@fl_jcarey_desktop
Fix typo in pm4 spec.
Change 88832 on 2003/03/06 by gregs@gregs_r400_win_marlboro
update
Change 88766 on 2003/03/06 by ashishs@fl ashishs r400 win
updated for texture wrap bug which has been closed now
Change 88746 on 2003/03/06 by mkelly@fl_mkelly_r400_win_laptop
Completes initial check of prim type detection in the pixel shader
checking SQ POINT (r400sc_sp_sample_cntl_09), SQ LINE (r400sc_sp_sample_cntl_11)
and SQ POLY (this checkin).
Change 88591 on 2003/03/05 by mzhu@mzhu_crayola_win_tor
```

```
Change overlay base address to be different with graphics base address in chapter
3.4.8.8.
Change 88577 on 2003/03/05 by gregs@gregs_r400_win_marlboro
update
Change 88553 on 2003/03/05 by nbarbier@nbarbier_r400_win_tor
Updated section 9.4.
Change 88534 on 2003/03/05 by mkelly@fl_mkelly_r400_win_laptop
MultiPass Indirect Buffer multiple looping...
Change 88515 on 2003/03/05 by mkelly@fl mkelly r400 win laptop
MultiPass Indirect Buffer / SC pixel LOOP interaction / 2 Segment / 2 Pass
Change 88445 on 2003/03/04 by csampayo@fl_csampayo_r400
More VGT pass-thru tests checking grouper data types
Change 88405 on 2003/03/04 by mzhu@mzhu_crayola_win_tor
Add BASE_ADDRESS = 384MB - 4KB case for graphics, overlay, icon and cursor in chapter
3.4.7.2, 3.4.7.3, 3.4.8.4 and 3.4.8.8.
Change 88370 on 2003/03/04 by gregs@gregs\_r400\_win\_marlboro
update
Change 88360 on 2003/03/04 by grayc@grayc r400 win
initial release of block validation blocks
Change 88347 on 2003/03/04 by mkelly@fl mkelly r400 win laptop
Update...
Change 88327 on 2003/03/04 by fliljero@fl_frank
added wait_gfx_idle(); to force synchronization
Change 88312 on 2003/03/04 by fliljero@fl frank
mem-mapped real-time SQ constant regs moved to a 16 word alignment - from 0x124a0 to
12500
```

```
Change 88220 on 2003/03/03 by jiezhou@cn_jiezhou
first testplan review
Change 88147 on 2003/03/03 by tien@ma spinach
Let's try this again. same as prev rev.
Change 88146 on 2003/03/03 by tien@ma spinach
Updated to include new bits in r400TxVtxInstConstSqTp.xls
Change 88116 on 2003/03/03 by mzhu@mzhu_crayola_win_tor
Change overlay gamma correction register default values to be linear.
Change 88023 on 2003/03/03 by ashishs@fl ashishs r400 win
updated CL special cases \%
Change 88004 on 2003/03/03 by georgev@devel georgevh2 r400 win marlboro
Updated to reflect new tests.
Change 87906 on 2003/03/01 by gregs@gregs_r400_win_cc
CXTAL1SHV2, PGTMDSSHVA4
Change 87776 on 2003/02/28 by fliljero@fl_frank
update
Change 87764 on 2003/02/28 by smoss@smoss crayola win
SU tests
Change 87762 on 2003/02/28 by llefebvr@llefebvr_r400
Added the new SX interface.
Change 87752 on 2003/02/28 by frising@frising_r400_win_marlboro
-add CLAMP_DISABLE to vertex fetch constant.
Change 87636 on 2003/02/28 by gregs@gregs_r400\_win\_marlboro
```

```
update
Change 87501 on 2003/02/27 by mzhu@mzhu_crayola_win_tor
Update 5.9.10
Change 87476 on 2003/02/27 by fliljero@fl frank
excel spreadsheet to track progress of test run the the gc testbench
Change 87468 on 2003/02/27 by gregs@gregs_r400_win_marlboro
update
Change 87452 on 2003/02/27 by mzhu@mzhu_crayola_win_tor
Add 5.9.9 More tests to improve code coverage
Add 5.9.10 Read F, V and H count when CRTC is disabled
Change 87298 on 2003/02/27 by mkelly@fl_mkelly_r400\_win_laptop
Update...
Change 87190 on 2003/02/26 by gregs@laptop1
updated widths of new memory pads + initial distribution
Change 87189 on 2003/02/26 by gregs@laptop1
<updated board straps + added TVDAC placement>
Change 87175 on 2003/02/26 by csampayo@fl csampayo r400
Update test to use all 8 contexts, update test tracker accordingly
Change 87168 on 2003/02/26 by csampayo@fl csampayo r400
Add new VGT pass-thru tests
Change 87160 on 2003/02/26 by sbagshaw@sbagshaw
fixed some details of SCL_CP_coefficient_ram SCL system test
Change 87131 on 2003/02/26 by sbagshaw@sbagshaw
procedure and description for SCL CP coefficient ram system test changed to correct
methods.
```

```
Change 86921 on 2003/02/25 by gregs@gregs_r400_win_marlboro
ESD power and groud pads for memory interface
Change 86915 on 2003/02/25 by gregs@gregs\_r400\_win\_marlboro
new crayola memory pads (breaks, corners, dcap, etc.)
Change 86894 on 2003/02/25 by csampayo@fl csampayo r400
Closing Bug# 72
Change 86772 on 2003/02/25 by jiezhou@cn_jiezhou
update
Change 86764 on 2003/02/25 by nbarbier@nbarbier\_r400\_win\_tor
More updates to the Code Coverage Section.
Change 86735 on 2003/02/25 by hdong@hdong r400 win- tor
revert #11
Change 86713 on 2003/02/25 by ashishs@fl ashishs r400 win
updated for r400sq_16tex_interp_combo_01
Change 86709 on 2003/02/25 by jacarey@fl\_jcarey\_desktop
Initial Baseline
Change 86701 on 2003/02/25 by hdong@hdong_r400_win-_tor
delete disp1(2)_x_end, and disp1(2)_y_end.
Change 86691 on 2003/02/25 by donaldl@fl donaldl p4
SC clock diagram
Change 86673 on 2003/02/25 by scamlin@scamlin_crayola_win
sq clocks
Change 86661 on 2003/02/25 by mkelly@fl_mkelly_r400_win_laptop
Simple RTS for Christeen...
```

```
Change 86605 on 2003/02/24 by csampayo@fl csampayo r400
Adding pass-thru tests with 32 bit indices
Change 86600 on 2003/02/24 by nbarbier@nbarbier r400 win tor
More updates to Code Coverage Section.
Change 86575 on 2003/02/24 by jacarey@fl jcarey2
Clarification of write confirm interval as experimental for R400
in the ME INIT packet.
Change 86490 on 2003/02/24 by jennho@jennho_crayola0
       New schematics for NPL.
Change 86489 on 2003/02/24 by jennho@jennho crayola0
Updated schematics based on the lastest RTL changes.
Change 86488 on 2003/02/24 by gregs@gregs r400 win marlboro
update
Change 86444 on 2003/02/24 by nbarbier@nbarbier_r400_win_tor
Added section for additional tests required to satisfy code coverage (Section 9).
Change 86429 on 2003/02/24 by gabarca@gabarca_crayola_win_cvd
Fixed viewport x, y start because the surface also rotates
Change 86428 on 2003/02/24 by tshah@fl tshah
Fixed wrong connection in VGT
Change 86415 on 2003/02/24 by jacarey@fl_jcarey_desktop
Comment to cp_int_cntl register
Change 86414 on 2003/02/24 by tshah@fl_tshah
Clock diagram for KS tile (RBBM+VGT+IDCT)
Change 86410 on 2003/02/24 by rramsey@RRAMSEY P4 r400 win
Add clock gating diagram for sc b
```

```
Change 86390 on 2003/02/24 by jacarey@fl_jcarey_desktop
Fix typo in indirect_buffer packet
Change 86374 on 2003/02/24 by jiezhou@cn jiezhou
update
Change 86371 on 2003/02/24 by gabarca@gabarca crayola win cvd
Clarified 7.3.2: we want underline and blink at the same time
Change 86350 on 2003/02/24 by mkelly@fl_mkelly_r400_win_laptop
Update SC status, re-assign most of the remaining cases to STRESS testing.
Change 86308 on 2003/02/23 by gregs@laptop1
added DRAM_SEL pins
Change 86288 on 2003/02/23 by gregs@gregs r400 win cc
new memory pads updated
Change 86181 on 2003/02/21 by gabarca@gabarca_crayola_win_cvd
after code coverage
Change 86144 on 2003/02/21 by nbarbier@nbarbier_r400_win_tor
Test Plan Update.
Change 86098 on 2003/02/21 by csampayo@fl csampayo r400
Some housekeeping
Change 86022 on 2003/02/21 by sbagshaw@sbagshaw
R400\ DC test plan with updated numbers for CRTC timings for most modes to account for
latency from Memory Hub (MH) to Display Composite Pipe (DCP).
Change 86005 on 2003/02/21 by mkelly@fl_mkelly_r400_win_laptop
Update...
Change 85948 on 2003/02/21 by mdoggett@MA_MDOGGETT_LT
```

```
Updated conditions for instruction and slice state transistions.
Change 85933 on 2003/02/21 by ashishs@fl_ashishs_r400_win
updated
Change 85893 on 2003/02/21 by mzhu@mzhu crayola win tor
Update 3.4.9.13 and 3.4.9.14 to cover three cases in different display area, icon only,
cursor only and icon is overlaped by cursor.
Change 85774 on 2003/02/20 by csampayo@fl csampayo r400
Adding point size clamping tests
Change 85692 on 2003/02/20 by mzhu@mzhu crayola win tor
Set different surface address from 0 - 256MB for graphics, overlay, icon and cursor in
chapter 3.4.7.2, 3.4.7.3, 3.4.8.4 and 3.4.8.8.
Change 85669 on 2003/02/20 by rfevreau@rfevreau r400 win
  Added 3 new tests for code coverage: 1) x2 on D2
                                        2) x2 with cursor codes 1, 2, 3
Change 85602 on 2003/02/20 by mzhu@mzhu_crayola_win_tor
Update tests in 3.4.9.13 and 3.4.9.14
Change 85539 on 2003/02/20 by mdoggett@MA MDOGGETT_LT
version 1.0 of out of order data return for TC. Will be eventually merged into TC spec.
Change 85504 on 2003/02/20 by gregs@gregs r400 win marlboro
update
Change 85486 on 2003/02/20 by gregs@gregs_r400_win_marlboro
update
Change 85475 on 2003/02/20 by mkelly@fl_mkelly_r400_win_laptop
RTS rectangle walk direction x_dir = 0, y_dir = 1
Change 85417 on 2003/02/19 by csampayo@fl csampayo r400
Some format cleanup
```

```
Change 85416 on 2003/02/19 by csampayo@fl_csampayo_r400
Some schedule update
Change 85411 on 2003/02/19 by smoss@smoss_crayola_win
update
Change 85403 on 2003/02/19 by gregs@gregs r400 win marlboro
minor update
Change 85397 on 2003/02/19 by ashishs@fl_ashishs_r400_win
updated
Change 85388 on 2003/02/19 by ashishs@fl ashishs r400 win
updated for the week of Feb 22nd
Change 85360 on 2003/02/19 by ashishs@fl_ashishs_r400_win
updated for 3 tests (need to be updated for 7 more)
Change 85345 on 2003/02/19 by ashishs@fl_ashishs_r400_win
updated
Change 85340 on 2003/02/19 by jiezhou@cn_jiezhou
Change FRC crtc from interlaces mode to progress mode
Change 85335 on 2003/02/19 by georgev@devel georgevh2 r400 win marlboro
Updated.
Change 85316 on 2003/02/19 by tshah@fl_tshah
clock diagram for the PD team
Change 85294 on 2003/02/19 by fliljero@fl_fliljeros
changed name of regclk_active signal coming from RBBM.
divided logic cloud into 2 separate clouds for the enables since they do not use the
same logic to generate the enables.
Change 85269 on 2003/02/19 by frising@ma frising
```

```
v.1.67
-{\tt FMT\_10\_11\_11\_AS\_16\_16\_16\_16\_16} \ \ {\tt and} \ \ {\tt FMT\_11\_11\_10\_AS\_16\_16\_16\_16} \ \ {\tt are\ not\ degammable.}
Change 85204 on 2003/02/19 by jacarey@fl_jcarey_desktop
Fix typo for trans bitblt for clr cmp src fields
Change 85203 on 2003/02/19 by csampayo@fl csampayo r400
More format updates
Change 85182 on 2003/02/19 by bhankins@fl_bhankins_r400_win
Initial checkin
Change 85164 on 2003/02/19 by mkelly@fl_mkelly_r400_win_laptop
Update...
Change 85140 on 2003/02/18 by csampayo@fl csampayo lt r400
Added charts
Change 85126 on 2003/02/18 by gregs@laptop1
DRENB for dvo clock and control is high
Change 85118 on 2003/02/18 by jling@jling_crayola0
Added OE signal from Strobe to data nearpad in visio diagram
Change 85008 on 2003/02/18 by scamlin@scamlin crayola win
renamed and added stuff based on PD feedback
Change 84981 on 2003/02/18 by jiezhou@cn jiezhou
updating test plan to reflect hardware changes.
Change 84967 on 2003/02/18 by gregs@laptop1
update
Change 84922 on 2003/02/18 by csampayo@fl csampayo r400
```

Initial checkin

```
Change 84920 on 2003/02/18 by mzhu@mzhu_crayola_win_tor
Correct register setting in 3.4.9.13 and 3.4.9.14
Change 84914 on 2003/02/18 by mzhu@mzhu crayola win tor
Add 3.4.9.16 Data pattern for Graphics and Overlay Keyer Code Coverage
Change 84903 on 2003/02/18 by gregs@laptop1
improvements
Change 84807 on 2003/02/17 by mzhu@mzhu_crayola_win_tor
Add 3.4.9.13 Test YCbCr -> sRGB -> YCbCr
Add 3.4.9.14 Icon and Cursor Data Clamping
Add 3.4.9.15 Color Space Conversion Data Clamping
Change 84773 on 2003/02/17 by jiezhou@cn_jiezhou
updating for the second review
Change 84568 on 2003/02/14 by jhoule@MA JHOULE
v 1.66:
Changed FMT_24_8* formats to only fetch the Z value, as this was the original scheme.
Stencil reads can be done by using FMT_8_8_8_8 using another constant.
Updated degamma comments to account for the fact that NUM FORMAT ALL must be set to RF,
since degamma only makes sense on uRF source.
Change 84541 on 2003/02/14 by jling@jling crayola0
Removed VMODE0/1 from memory section
Change 84535 on 2003/02/14 by vgoel@fl vgoel2
updated register coverage
Change 84527 on 2003/02/14 by jling@jling_crayola0
R400 io pad drawing (premlinimary)
Change 84505 on 2003/02/14 by mkelly@fl mkelly r400 win laptop
Real Time Stream Line List Primitive
```

```
Change 84420 on 2003/02/14 by csampayo@fl_csampayo_r400
Added multi context tests
Change 84336 on 2003/02/13 by jowang@jowang R400 win
updated after code coverage review
Change 84290 on 2003/02/13 by mkelly@fl mkelly r400 win laptop
RTS intertwined with Hi-Z viz query
Change 84278 on 2003/02/13 by georgev@devel_georgevh2_r400_win_marlboro
Updated with new tests.
Change 84270 on 2003/02/13 by gabarca@gabarca_crayola_win_cvd
Fixed
Change 84264 on 2003/02/13 by alleng@alleng r400 win marlboro
Initial submission of R400 notes
Change 84235 on 2003/02/13 by mkelly@fl mkelly r400 win laptop
Checkpoint...
Change 84122 on 2003/02/13 by mkelly@fl_mkelly_r400\_win_laptop
Update...
Change 83959 on 2003/02/12 by ygiang@ygiang_r400_win_marlboro_p4
updated: cp cntrl reg for perf counters
Change 83839 on 2003/02/12 by mdoggett@mdoggett r400 win platypus
Changed all Two Layer L2 Block Offsets.
Changed SM3.
Added formats 54,55,56 changed 7,16, 17.
Updated top level to reflect block split.
Change 83798 on 2003/02/12 by mdoggett@MA_MDOGGETT_LT
Changed all Two Layer L2 Block Offsets.
Changed SM3.
Added formats 54,55,56 changed 7,16, 17.
```

Updated top level to reflect block split. Change 83705 on 2003/02/11 by jiezhou@cn_jiezhou updating from the design review Change 83646 on 2003/02/11 by jiezhou@cn jiezhou update Change 83605 on 2003/02/11 by $ashishs@fl_ashishs_r400_win$ updated Change 83597 on 2003/02/11 by jhoule@MA_JHOULE Final description of mipfilter point (potential reuse of trijuice) Change 83555 on 2003/02/11 by jiezhou@cn jiezhou clock diagram for design review Change 83549 on 2003/02/11 by jacarey@fl jcarey desktop Allow SRC H/W != DST H/W for all AlphaBlend OPs in Microcode Updated associated documents. Change 83530 on 2003/02/11 by jhoule@MA JHOULE 0.9.20 Added mip rounding in LOD computation pseudo-code Change 83515 on 2003/02/11 by jiezhou@cn jiezhou Increase H-total in DMIF stress tests. Change 83493 on 2003/02/11 by jimmylau@jimmylau r400 win tor Update the table for AP SIZE in section 6.1 because AP SIZE is the same for a particular aperture size strap, regardless of multifunction. Change 83389 on 2003/02/10 by nbarbier@nbarbier_r400_win_tor Updated document with list of signals in DC/IO interface that don't go through DCIO block.

Change 83328 on 2003/02/10 by jhoule@MA JHOULE

```
Updated replication table
Change 83253 on 2003/02/10 by csampayo@fl_csampayo_r400
Housekeeping SU section
Change 83238 on 2003/02/10 by csampayo@fl csampayo r400
Update real time parameter registers
Change 83233 on 2003/02/10 by mkelly@fl_mkelly_r400_win_laptop
Use all 4 SQ parameters for RT streams...
Change 83130 on 2003/02/09 by gregs@laptop1
update for netlist rev4.
Change 83084 on 2003/02/08 by jimmylau@jimmylau r400 win tor
Modify diagram on section 6.1 to illustrate change of HDP/VGA/RBBM interface
Add tables in section 6.1 to illustrate the new strap settings for memory/register/ROM
aperture size
Add description to the PCI spec. Rev2.3 support
Change 83080 on 2003/02/08 by gregs@laptop1
MC IO wr strb + DRAM SEL + VREFs
Change 82947 on 2003/02/07 by csampayo@fl_csampayo_r400
Updates to SQ PROGRAM CNTL
Change 82944 on 2003/02/07 by jacarey@fl jcarey2
Update Spec
Change 82939 on 2003/02/07 by jowang@jowang_R400_win
added Early1 and Early2 states
Change 82927 on 2003/02/07 by nbarbier@nbarbier_r400_win_tor
Minor changes.
Change 82845 on 2003/02/07 by csampayo@fl csampayo r400
Add missing sq basic test test case
```

```
Change 82838 on 2003/02/07 by llefebvr@llefebvr_r400
small update regarding the implementation change for the Pos Allocated / PC allocated
bits.
Change 82808 on 2003/02/07 by mkelly@fl mkelly r400 win laptop
       Validate dummy quad deallocation in pixel vector buffer is good.
Change 82734 on 2003/02/06 by gregs@laptop1
added VREFs
Change 82699 on 2003/02/06 by csampayo@fl_csampayo_r400
Remove non-existing tests (randomized)
Change 82684 on 2003/02/06 by nbarbier@nbarbier_r400_win_tor
Updated Section 8.
Change 82683 on 2003/02/06 by csampayo@fl csampayo r400
Adding Marl test list tracker
Change 82639 on 2003/02/06 by georgev@devel_georgevh2_r400_win_marlboro
Really SQ, that's why it's deleted.
Change 82560 on 2003/02/06 by ashishs@fl_ashishs_r400_win
updated to CL/VTE to 99% . Changed the %formula to account for the CL_POINT_SIZE
register not being used.
Change 82554 on 2003/02/06 by rfevreau@rfevreau_r400_win
First test using ico file for data
Change 82543 on 2003/02/06 by dwong@cndwong2
added details on reset schemes
Change 82508 on 2003/02/06 by jacarey@fl_jcarey_desktop
Update NQ Flag for Micro Engine's DMA Engine
Change 82497 on 2003/02/06 by gregs@gregs r400 win marlboro
```

```
update
Change 82489 on 2003/02/06 by ashishs@fl_ashishs_r400_win
updated
Change 82429 on 2003/02/06 by mkelly@fl_mkelly_r400_win_laptop
Simplified version of r400sc rts 12 for regress e
Change 82426 on 2003/02/06 by ashishs@fl_ashishs_r400_win
updated
Change 82278 on 2003/02/05 by csampayo@fl csampayo r400
Update to better see register coverage
Change 82256 on 2003/02/05 by csampayo@fl_csampayo_r400
Add field to PA CL ENHANCE
Change 82239 on 2003/02/05 by ashishs@fl_ashishs_r400_win
updated
Change 82235 on 2003/02/05 by gregs@gregs r400 win marlboro
netlist revision 4
Change 82213 on 2003/02/05 by jacarey@fl jcarey desktop
Correct miscellaneous typo's in the documetn
Change 82184 on 2003/02/05 by csampayo@fl_csampayo_r400
Increase max memory size for tests. Update spreadsheet
Change 82156 on 2003/02/05 by georgev@ma_georgev
Renamed file.
Change 82059 on 2003/02/05 by gregs@gregs_r400_win_marlboro
revision 4 netlist release
Change 81881 on 2003/02/04 by llefebvr@llefebvr r400
```

```
added some more comments in the spreadsheet.
Change 81860 on 2003/02/04 by jacarey@fl_jcarey_desktop
Miscellaneous Documentation Updates
Change 81791 on 2003/02/04 by mkelly@fl_mkelly_r400_win_laptop
RTS intertwined with Viz Query and kill pix post detail mask.
Change 81731 on 2003/02/04 by mkelly@fl_mkelly_r400_win_laptop
Viz Query intertwined with RT streams, complete...
Change 81712 on 2003/02/04 by jacarey@fl jcarey desktop
Update write-only status of microcode read address registers.
Change 81667 on 2003/02/03 by gregs@laptop1
fixed bug introduced earlier
Change 81620 on 2003/02/03 by gregs@gregs_r400_win_marlboro
cleaned JTAG interface
Change 81538 on 2003/02/03 by llefebvr@llefebvr r400
Missed bits 41 and 42 in the SQ EXEC instruction format. Those are RESERVED as well.
Change 81486 on 2003/02/03 by ygiang@ygiang r400 win marlboro p4
added: sp coverage
Change 81412 on 2003/02/03 by ashishs@fl ashishs r400 win
updated
Change 81401 on 2003/02/03 by llefebvr@llefebvr_r400
refined the interfaces to the SP to specify wich signals should or shouldn't be
pipelined.
Change 81382 on 2003/02/03 by jacarey@fl jcarey desktop
Add clock gating diagram to spec.
Add note that debug data I/O is asynchronous.
```

```
Change 81347 on 2003/02/02 by gregs@laptop1
update
Change 81312 on 2003/02/02 by gregs@gregs_r400_win_cc
update
Change 81261 on 2003/02/01 by gregs@gregs r400 win cc
added note that debug bus is asynchronous and there shopuld be no registers on inputs
or outputs.
Change 81219 on 2003/01/31 by lchen@lchen_crayola0
MEM IO schematics and netlist
Change 81215 on 2003/01/31 by lchen@lchen crayola0
version 4
Change 81159 on 2003/01/31 by vgoel@fl vgoel2
updated VGT register coverage from TE setup
Change 81126 on 2003/01/31 by fliljero@fl_frank
new drawing for PD team
Change 81080 on 2003/01/31 by jacarey@fl_jcarey_desktop
Fix Typo in ME INIT packet.
Change 81008 on 2003/01/31 by jacarey@fl jcarey desktop
1. Correct Width of Microcode RAM read and write registers.
2. Fix re-ordering queue data available determination
3. Document updates for #1.
Change 80832 on 2003/01/30 by llefebvr@llefebvre_laptop_r400
wording change for the predicate override bit.
Change 80785 on 2003/01/30 by jacarey@fl jcarey desktop
Clarify that ME_INIT invalidates pointers only if processed in a non-real-time stream.
```

This does not happen if it is processed in a real-time stream.

Change 80783 on 2003/01/30 by georgev@ma_georgev

First part of register list for tests. Not finished due to pending changes.

Change 80707 on 2003/01/30 by mkelly@fl mkelly r400 win laptop

Update comments, RTS with SC quad order enable toggling...

Change 80686 on 2003/01/30 by mkelly@fl_mkelly_r400_win_laptop

RTS and SC FIFO sizing combinations...

Change 80682 on 2003/01/30 by jacarey@fl_jcarey_desktop

Pseudocode Update #2 for today

Change 80680 on 2003/01/30 by jacarey@fl jcarey desktop

Update ME_INIT in Pseudocode Land

Change 80679 on 2003/01/30 by mkelly@fl mkelly r400 win laptop

RTS combinations with Vtx and Pix pipes 0/2 disabled with SC one quad per clock toggled, shader back pressure, interpolator shading toggling

Change 80664 on 2003/01/30 by jacarey@fl jcarey desktop

- 1. Reserved bits in $\ensuremath{\mathtt{CP}}\xspace_{\mathtt{DEBUG}}$ register are preserved.
- 2. Added default for CP_INT_STAT register.
- 3. Add number dword=0 check for PolyScanLines and HostData Blt packets.
- 4. Associated documentation updates for above items.
- 5. Update full chip tests for above items.

Change 80503 on 2003/01/29 by $csampayo@fl_csampayo_r400$

Updated VGT section

Change 80479 on 2003/01/29 by $mkelly@fl_mkelly_r400_win_laptop$

Vtx and pix pipes 2 and 3 disabled with RTS triangles and rectangles and non-RTS stipple lines, complete

Change 80426 on 2003/01/29 by $rfevreau@rfevreau_r400_win$

Changed tests to use bitmaps for cursor data

```
Change 80422 on 2003/01/29 by jacarey@fl_jcarey_desktop
Add note to spec regarding the preservation of "reserved" bits in the cp_debug
register.
Change 80420 on 2003/01/29 by jennho@jennho_crayola0
      Added ADDR/Command/RD_DATA/DIM signals floorplan.
Change 80401 on 2003/01/29 by csampayo@fl csampayo r400
Update VGT section
Change 80398 on 2003/01/29 by csampayo@fl_csampayo_r400
Adding new VGT test for missing reg coverage
Change 80305 on 2003/01/29 by mkelly@fl mkelly r400 win laptop
Check stippled line integrity with real time streams, complete.
Change 80022 on 2003/01/28 by nkociuk@ma nkociuk
update TP perfcounter events
Change 79996 on 2003/01/28 by gregs@gregs_r400_win_marlboro
first release of the new memory pads.
Change 79984 on 2003/01/28 by mkelly@fl_mkelly_r400_win_laptop
Polymode RTS test
Change 79957 on 2003/01/28 by kcorrell@kcorrell r400 docs marlboro nb
edited hi interface description
Change 79899 on 2003/01/28 by hartogs@fl_hartogs
Updated VGT_SQ interface descripttion.
Change 79824 on 2003/01/27 by csampayo@fl_csampayo_r400
Updated VGT status
Change 79818 on 2003/01/27 by csampayo@fl csampayo r400
Adding new VGT fifo tests
```

```
Change 79762 on 2003/01/27 by tshah@fl_tshah
added RBBM_CGM_soft_reset (hardware+emulator+tests+doc)
Change 79738 on 2003/01/27 by llefebvr@llefebvre_laptop_r400
some updates.
Change 79725 on 2003/01/27 by gregs@gregs r400 win marlboro
mem interface tests PASSED.
Change 79674 on 2003/01/27 by georgev@ma_georgev
First revision.
Change 79649 on 2003/01/27 by 1chen@lchen crayola0
checked in the shivah NPL schematics
Change 79613 on 2003/01/27 by ashishs@fl ashishs r400 win
added test description and updated tracker
Change 79549 on 2003/01/26 by gregs@laptop1
update
Change 79547 on 2003/01/26 by gregs@laptop1
update
Change 79527 on 2003/01/26 by gregs@laptop1
mem interface clean (except address from MCs)
Change 79368 on 2003/01/24 by gregs@gregs_r400_win_marlboro
update
Change 79284 on 2003/01/24 by georgev@ma_georgev
Added a few tests. Yung needs file for his nefarious purposes.
Change 79270 on 2003/01/24 by jimmylau@jimmylau r400 win tor
First draft of BIF coherency test cases for R400
```

```
Change 79256 on 2003/01/24 by ashishs@fl_ashishs_r400_win
updated
Change 79235 on 2003/01/24 by mkelly@fl_mkelly_r400_win_laptop
RT provoking vertex looking good through interpolator on one parameter.
Change 79191 on 2003/01/24 by efong@efong r400 win tor doc
moved gord to ltis188 and syang to ltis186
Change 79181 on 2003/01/24 by csampayo@fl_csampayo_r400
Updated VGT section
Change 79176 on 2003/01/24 by jhoule@MA JHOULE
Changed DXT from 5/6 to 8 always.
Only kept first 2 sheets (should be enough).
Change 79174 on 2003/01/24 by mkelly@fl mkelly r400 win laptop
Add modified and shortened version of r400sc rts 09 (back face check on nonRT vs RT
prims) to regress_e
Change 79161 on 2003/01/24 by mkelly@fl mkelly r400 win laptop
Final, validating Pixel Shader face bit detection from sc_sp with nonRT and RT
primtives
Change 79155 on 2003/01/24 by jacarey@fl jcarey desktop
Clarify update of constant write enables for LCC packet.
Change 79094 on 2003/01/23 by ashishs@fl ashishs r400 win
updated to remove the clip error detect 0%
Change 79063 on 2003/01/23 by csampayo@fl_csampayo_r400
Initial checkin
Change 78984 on 2003/01/23 by llefebvr@llefebvr r400
small correction on memory export buffer sizes.
```

```
Change 78972 on 2003/01/23 by khabbari@khabbari_r400_win
changed the syncgen test list
Change 78962 on 2003/01/23 by mzhu@mzhu crayola win tor
Update for MH-DC latency tests in chapter 3.3
Change 78947 on 2003/01/23 by jimmylau@jimmylau r400 win tor
Update after review on Jan 23, 03
Change 78917 on 2003/01/23 by jacarey@fl_jcarey_desktop
Fix LCC and Set Constant for incremental register updates.
Change 78913 on 2003/01/23 by efong@efong_r400_win_tor_doc
Added in Project linux assignments excel spreadsheet
Change 78876 on 2003/01/23 by mkelly@fl mkelly r400 win laptop
Validate face bit in pixel shader for multi-tile coverage prims
Change 78874 on 2003/01/23 by ashishs@fl ashishs r400 win
updated to have percentages for the CL/VTE registers with comments
Change 78771 on 2003/01/22 by jennho@jennho_crayola0
Preliminary r400 MEM IO ring visio diagram.
Change 78733 on 2003/01/22 by ashishs@fl ashishs r400 win
updated
Change 78717 on 2003/01/22 by jimmylau@jimmylau r400 win tor
Initial Action items for BIF
Change 78693 on 2003/01/22 by gregs@gregs_r400_win_cc
update
Change 78663 on 2003/01/22 by gregs@gregs r400 win cc
update
```

```
Change 78658 on 2003/01/22 by jacarey@fl_jcarey_desktop
Update for AlphaBlend for ARGB1555 and Alpha_Source Blending
Change 78557 on 2003/01/22 by jhoule@MA JHOULE
Changed * FLOAT formats to have fast path available under VFetch only.
This means TFetches only do 32b/clock.
Corrected cycle multiplier for FMT 32 32 32 32 (was set to x3 instead of x4).
Added REQUEST_LATENCY field to constants. Controls out-of-order behavior.
Change 78432 on 2003/01/22 by jacarey@fl_jcarey_desktop
Fix Typo in Boolean Descriptions
Change 78374 on 2003/01/21 by lkang@lkang r400 win tor
update
Change 78369 on 2003/01/21 by gregs@gregs r400 win cc
Tuesday
Change 78345 on 2003/01/21 by ashishs@fl_ashishs_r400\_win
updated
Change 78304 on 2003/01/21 by frising@ma frising
v.1.93
-Z export from pixel sahder now in X channel.
-updated mova, kill and predicate instructions coissue rules now that we have a
separate bus for mova results.
-add note saying input modifiers do not apply to PreviousScalar.
-show not used opcodes.
-add clamping to mova result sent to SQ.
-add 6 new scalar instructions that operate on a constant and GPR and associated
documentation.
Change 78286 on 2003/01/21 by grayc@grayc_r400_win
connections of gfx pipeline
Change 78267 on 2003/01/21 by jennho@jennho crayola0
```

Preliminary NPL schematics; not simulated yet.

```
Change 78098 on 2003/01/21 by gregs@gregs_r400_win_cc
Monday update
Change 78045 on 2003/01/20 by alleng@alleng r400 win marlboro
Added updated information regarding the RB performance counters...
Change 77987 on 2003/01/20 by csampayo@fl csampayo r400
Initial checkin
Change 77984 on 2003/01/20 by mzhu@mzhu_crayola_win_tor
Update DMIF model force signal names for MH-DC latency tests in chapter 3.3
Change 77922 on 2003/01/20 by ashishs@fl ashishs r400 win
updated
Change 77916 on 2003/01/20 by jacarey@fl jcarey desktop
1. Pixel Shader and Microcode to Set B6 for AAFONT packets.
2. Vertex Shader to ignore B10 for packets with Embedded Source.
3. Updated RB BlendControl Settings for AlphaBlend Packet.
4. Associated Documentation for above changes.
Change 77910 on 2003/01/20 by mzhu@mzhu_crayola_win_tor
Add MH-DC latency tests in chapter 3.3
Change 77887 on 2003/01/20 by csampayo@fl csampayo r400
Some CL housekeeping
Change 77866 on 2003/01/20 by ashishs@fl ashishs r400 win
updated
Change 77848 on 2003/01/20 by jacarey@fl_jcarey_desktop
Note to Ply_NextScan and NextChar packets about required preceeding packets.
Change 77665 on 2003/01/17 by jennho@jennho crayola0
<Preliminary R400 MEM IO timing spreadsheet.>
```

```
Change 77661 on 2003/01/17 by jennho@jennho_crayola0
<Preliminary R400 MEM IO timing spreadsheet.>
Change 77619 on 2003/01/17 by gregs@gregs_r400_win_marlboro
Friday update
Change 77558 on 2003/01/17 by mkelly@fl mkelly r400 win laptop
Update...
Change 77554 on 2003/01/17 by mkelly@fl_mkelly_r400_win_laptop
Rectangle and triangle real time stream initial functional
Change 77520 on 2003/01/17 by jacarey@fl_jcarey2
Miscellaneous Comments to Registers
Change 77493 on 2003/01/17 by georgev@ma georgev
Added descriptions of SQ TESTS.
Change 77490 on 2003/01/17 by ashishs@fl ashishs r400 win
updated
Change 77459 on 2003/01/17 by lchen@lchen_crayola0
initial release of the MEM IO schematics and spice netlist
Change 77457 on 2003/01/17 by jacarey@fl jcarey desktop
1. Updated RB BlendControl for AlphaBlend Packet
2. Added Microcode for Source Rotation for 2D.
3. Updated Documentation for Source Rotation and RB BlendControl
Change 77306 on 2003/01/16 by gregs@gregs r400 win marlboro
fixed AGP clock layer (damaged by accident ..)
Change 77297 on 2003/01/16 by gregs@gregs_r400_win_marlboro
Thursday update
```

Change 77273 on 2003/01/16 by $ashishs@fl_ashishs_r400_win$

updated Change 77174 on 2003/01/16 by georgev@ma_georgev Added new list of SQ tests for Florida. Change 77167 on 2003/01/16 by jennho@jennho crayola0 <rv350 mem IO timing spreadsheet> Change 77102 on 2003/01/16 by mkelly@fl_mkelly_r400_win_laptop Update Change 77097 on 2003/01/16 by kcorrell@kcorrell_r400_docs_marlboro_nb Fixed error in mhr_mhs_word, mhb_mhs_word (made description match hardware). Updated update path to read cache from merge logic. Change 77093 on 2003/01/16 by llefebvr@llefebvr r400 Modified the alloc instruction to include a no-serial bit. Change 77086 on 2003/01/16 by mkelly@fl_mkelly_r400_win_laptop 12 non real time packets of one triangle, each with 16 real time rectangle streams... Change 77014 on 2003/01/15 by gregs@laptop1 updated address and CKE pads. Change 77001 on 2003/01/15 by llefebvr@llefebvr r400 Interface change from the SX (alloc dealloc bus) and interface change from the SP (predicates and kill mask). Change 76917 on 2003/01/15 by mzhu@mzhu crayola win tor Add test 3 for full width icon and cursor at 3.4.9.12 Change 76894 on 2003/01/15 by ashishs@fl_ashishs_r400_win removed vap_vte_vec0_13 since redundant with vap_vte_vec0_05

Change 76893 on 2003/01/15 by ashishs@fl ashishs r400 win

updated

```
Change 76880 on 2003/01/15 by vgoel@fl vgoel2
updated bug report to date
Change 76868 on 2003/01/15 by lseiler@lseiler r400 win marlboro
Fixed a bug in the 3D tiling equation
Change 76849 on 2003/01/15 by gregs@laptop1
updated MCLK templates, macros, connections.
Change 76833 on 2003/01/15 by frising@ma frising
v.1.64
-no functional changes just clean-up.
--make description of unused field in texture fetch instruction state that it is
--add a missing outline border to above unused field.
--merge comments 14.) and 16.) in R400_DATA_FORMAT table section.
--make texture constant fields fit on to two pages.
Change 76816 on 2003/01/15 by ashishs@fl ashishs r400 win
updated
Change 76812 on 2003/01/15 by ashishs@fl_ashishs_r400_win
updated
Change 76807 on 2003/01/15 by ashishs@fl_ashishs_r400_win
removed r400vte_pos_neg_combo_04 since redundant with r400vte_pos_neg_combo_01
Change 76746 on 2003/01/14 by gregs@laptop1
updated DIM pads and macro.
Change 76730 on 2003/01/14 by gregs@laptop1
Tuesday (01-14-03) work in progress
Change 76723 on 2003/01/14 by ashishs@fl_ashishs_r400_win
updated
Change 76708 on 2003/01/14 by jhoule@MA JHOULE
```

```
1.63
FMT_2_10_10_10 was wrongly set as degamma'able.
The new FMT_2_10_10_10_AS_16_16_16_16 must be used instead.
Change 76701 on 2003/01/14 by jiezhou@cn jiezhou
updating frc settings
Change 76644 on 2003/01/14 by csampayo@fl csampayo r400
Updated HOS status
Change 76582 on 2003/01/14 by mkelly@fl_mkelly_r400_win_laptop
Update plan chart...
Change 76578 on 2003/01/14 by mkelly@fl_mkelly_r400_win_laptop
Update SC...
Change 76576 on 2003/01/14 by kcorrell@kcorrell r400 docs marlboro nb
Added position of 3 bit endian field in Tag Buffer Contents table.
Changed mhr_mhs interface definition to support 128 bit transfers.
Fixed a couple of typo's.
Change 76557 on 2003/01/14 by mkelly@fl_mkelly_r400_win_laptop
OGL Rasterization validation...
Change 76417 on 2003/01/14 by mkelly@fl_mkelly_r400_win_laptop
Simple test, validate DX rasterization rules...
Change 76391 on 2003/01/13 by grayc@grayc r400 win
updated for read test
Change 76388 on 2003/01/13 by gregs@laptop1
work in progress on memory interface.
Monday 01-13-03.
data and strobe templates + data PadList
Change 76366 on 2003/01/13 by ashishs@fl ashishs r400 win
CL/VTE final synch complete
```

```
Change 76364 on 2003/01/13 by ashishs@fl_ashishs_r400_win
added 3 tests (2 barycentric and 1 DX/OGL space test to individual submission count)
Change 76361 on 2003/01/13 by ashishs@fl ashishs r400 win
CL/VTE are perfectly updated after this submission
Change 76311 on 2003/01/13 by ashishs@fl ashishs r400 win
updated
Change 76298 on 2003/01/13 by jiezhou@cn jiezhou
update dto increment (13bits frac represents 20bits frac)
Change 76290 on 2003/01/13 by mkelly@fl_mkelly_r400_win_laptop
Update...
Change 76278 on 2003/01/13 by mkelly@fl mkelly r400 win laptop
Update...
Change 76269 on 2003/01/13 by ashishs@fl ashishs r400 win
updated for r400vte_coverage_02(removed)
Change 76263 on 2003/01/13 by ashishs@fl_ashishs_r400_win
updated for r400vte_coverage_02 since that test is deleted. Just decreased the count
from the VT coverage.
Change 76199 on 2003/01/13 by jacarey@fl jcarey desktop
Documentation for the 2D Endian Mode Programming
Change 76196 on 2003/01/13 by jhoule@MA_JHOULE
1.62:
- Added formats FMT_2_10_10_10_AS_16_16_16_16, FMT_10_11_11_AS_16_16_16_16, and
FMT_11_11_10_AS_16_16_16_16, which is equivalent to the old TFetch values.
- Changed FMT_2_10_10_10, FMT_10_11_11, and FMT_11_11_10 to be fast and unfilterable
(equivalent
to the old VFetch).
- Added Filterable? column.
- Added comments regarding undefined behavior when filter is not set to Point.
```

```
Change 76174 on 2003/01/13 by jhoule@MA JHOULE
1.61:
Single LOD_BIAS, located where LOD_BIAS_H was.
Added GRAD EXP ADJUST \{H \mid V\} which should achieve the intended functionality of the
dual-bias scheme (non-square-pixel resolve, and scanline-interleaved rendering under
multi-chip).
Corrected minor typo (performace -> performance) on Features page.
Change 76169 on 2003/01/13 by csampayo@fl_csampayo_r400
Revised plan for the VGT and SU and updated status for the following tests:
r400vgt_dma_index_primtypes_02
r400vgt_real_time_events_07
Change 76117 on 2003/01/13 by ashishs@fl_ashishs_r400_win
updated
Change 76067 on 2003/01/12 by gregs@laptop1
update - pad ring - work in progress
Change 76066 on 2003/01/12 by jiezhou@cn jiezhou
Initial release
Change 75932 on 2003/01/10 by gregs@gregs\_r400\_win\_marlboro
update
Change 75926 on 2003/01/10 by rherrick@ma rherrick crayola
Implemented DC Urgent latency checker... Also implemented parser hooks to support
Bandwidth checking parameters.
Change 75914 on 2003/01/10 by jiezhou@cn_jiezhou
make tests smaller
Change 75815 on 2003/01/10 by jacarey@fl_jcarey_desktop
Update equation used by micro engine for 1D sources for the SRC \rm X / Y terms.
Change 75811 on 2003/01/10 by rfevreau@rfevreau r400 win
   Cursor test fixes
```

Change 75642 on 2003/01/09 by csampayo@fl_csampayo_r400 Added 1 VGT performance and 1 VGT debug case, updated test_list and tracker accordingly Change 75512 on 2003/01/09 by jacarey@fl jcarey desktop 1. Add level of indirection to the And_Mask and Or_Mask in the Reg_RMW packet. 2. Updated Associated Unit Test. 3. Updated PM4 Spec Accordingly. 4. Added Note to Polyline packet, that the scan_count needs to be 1 or greater. Change 75356 on 2003/01/08 by hartogs@fl hartogs See version update info in document. Change 75303 on 2003/01/08 by $mkelly@fl_mkelly_r400_win_laptop$ Stress vtx and pix pipe disable combinations with stippled LINE LIST Change 75236 on 2003/01/08 by ashishs@fl ashishs r400 win updated for clip disable count Change 75232 on 2003/01/08 by ashishs@fl ashishs r400 win updated for new tests. Also reduced the count for clip disable tests from $4\ \mathrm{to}\ 1$ Change 75199 on 2003/01/08 by ashishs@fl_ashishs_r400_win updated(removed r400cl_ucp_pointlist_01) Change 75197 on 2003/01/08 by jacarey@fl jcarey desktop 1. Reduction of queue sizes in CP for area savings. Change 75191 on 2003/01/08 by jhoule@MA JHOULE Added TC/TP replication table and associated explanation. Added a few tables to table of content. Change 75183 on 2003/01/08 by vromaker@MA_VIC_P4 latest version of sq top level block diagram

Added new VGT pass-thru block test, updated test list and test tracker accordingly.

Change 75173 on 2003/01/08 by csampayo@fl csampayo r400

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```
Change 75002 on 2003/01/07 by gregs@gregs_r400_win_marlboro
DDCldata, DDClclk, VSYNCA, HSYNCA, VSYNCB, and HSYNCB now incluided in DFT chain.
Change 74942 on 2003/01/07 by llefebvr@llefebvre laptop r400
New revision of the spec.
Change 74928 on 2003/01/07 by jiezhou@cn jiezhou
update FRC DTO_INC parameters
Change 74922 on 2003/01/07 by jiezhou@cn_jiezhou
See the reversion description
Change 74919 on 2003/01/07 by mdoggett@mdoggett r400 win platypus
Fixed figure for TCA
Change 74887 on 2003/01/07 by gregs@gregs r400 win marlboro
update
Change 74783 on 2003/01/06 by gregs@gregs_r400_win_marlboro
added bad pipe disable register drawing.
Change 74742 on 2003/01/06 by ashishs@fl_ashishs_r400_win
updated comments for r400cl ucp cube 01
Change 74715 on 2003/01/06 by jacarey@fl jcarey desktop
Clarification of Invalidate_State packet w.r.t. use of Mem_Write
Change 74689 on 2003/01/06 by ashishs@fl_ashishs_r400_win
updated
Change 74686 on 2003/01/06 by ashishs@fl_ashishs_r400_win
updated
Change 74684 on 2003/01/06 by jacarey@fl jcarey desktop
Update width of brush offset to reflect 24 bits supported by the VGT.
```

```
Change 74668 on 2003/01/06 by vgoel@fl_vgoel2
added bug 1040
Change 74619 on 2003/01/06 by sbagshaw@sbagshaw
completed subsections of section 7 regarding the DAC output interface and DAC automatic
device detection circuit
Change 74589 on 2003/01/06 by mkelly@fl_mkelly_r400_win_laptop
Update...
Change 74510 on 2003/01/04 by gregs@laptop1
added BAD_PIPE_DISBLE_REGISTER logic diagram
Change 74357 on 2003/01/03 by mkelly@fl_mkelly_r400_win_laptop
256 points per packet, all 15 legal combinations of vtx pipe disable
Change 74351 on 2003/01/03 by rfevreau@rfevreau r400 win
  New goldens, put rg files back to 31 tests
Change 74331 on 2003/01/03 by csampayo@fl_csampayo_r400
Closed bugs# 102 and 103
Change 74279 on 2003/01/03 by smoss@smoss_crayola_win
gave credit to vivian for her three read tests
Change 74201 on 2003/01/02 by jiezhou@cn jiezhou
update for frame rate conversion SCL VIDCAP frame rate conv
Change 74196 on 2003/01/02 by frising@ma frising
v.0.99e
-MUL_PREV2 scalar instruction now checks if PreviousScalar or input1.x is a NaN and
returns -MAX_FLOAT if so.
Change 74194 on 2003/01/02 by frising@ma frising
v.1.92
```

```
-MUL_PREV2 scalar instruction now checks if PreviousScalar or SrcC.X is a NaN and
returns -MAX_FLOAT if so.
Change 74184 on 2003/01/02 by csampayo@fl csampayo lt r400
Updated test and test list for test r400vgt real time events 06 and updated
description/status on the test tracker for tests:
r400vgt real time events 04
r400vgt_real_time_events_05
r400vgt_real_time_events_06
Change 74154 on 2003/01/02 by gregs@gregs_r400_win_marlboro
update
Change 74152 on 2003/01/02 by gregs@gregs\_r400\_win\_marlboro
update
Change 74142 on 2003/01/02 by gregs@gregs r400 win marlboro
update
Change 74133 on 2003/01/02 by gregs@gregs r400 win marlboro
update
Change 74124 on 2003/01/02 by gregs@gregs\_r400\_win\_marlboro
< ROM straps re-arranged >
Change 74109 on 2003/01/02 by csampayo@fl csampayo lt r400
Some housekeeping
Change 74083 on 2003/01/02 by sbagshaw@sbagshaw
Added description of Scaler double buffered registers in section 9.5, section 7 started
with description of functionality and controls of DAC output interface
Change 74027 on 2003/01/01 by gregs@laptop1
update
Change 73990 on 2003/01/01 by gregs@gregs r400 win cc
хуг
```

```
Change 73877 on 2002/12/31 by mkelly@fl_mkelly_r400_win_laptop
Update...
Change 73655 on 2002/12/29 by nbarbier@nbarbier\_r400\_win\_tor
Added Stress test for dispout.
Change 73552 on 2002/12/27 by lchen@lchen crayola0
fix a typo
Change 73548 on 2002/12/27 by lchen@lchen_crayola0
update the r400 MEM IO spec based on latest info
Change 73425 on 2002/12/26 by mkelly@fl mkelly r400 win laptop
Update...
Change 73424 on 2002/12/26 by mkelly@fl_mkelly_r400_win_laptop
Update tracker...
Change 73328 on 2002/12/24 by gregs@gregs_r400_win_cc
added iodft modules configuration in column AC + modifications in VBA write pad data
routine.
Change 73234 on 2002/12/23 by enewman@enewman_r400_linux_marlboro
updated for NL 3.0
Change 72971 on 2002/12/20 by jhoule@MA JHOULE
Minor corrections and additions to the LOD calculation
Change 72964 on 2002/12/20 by jhoule@MA JHOULE
v0.9.16
Better description of LOD computation.
Updated pseudo-code.
Update TP_TC interface (pitches).
Change 72948 on 2002/12/20 by nbarbier@nbarbier r400 win tor
Added Genlocking test to dispout stress test section.
```

```
Change 72807 on 2002/12/20 by gabarca@gabarca_crayola_win_cvd
fixed viewport start spec
Change 72717 on 2002/12/20 by gregs@gregs_r400\_win\_marlboro
rev 3 netlist
Change 72710 on 2002/12/20 by smoss@smoss crayola win
SU tests
Change 72657 on 2002/12/19 by csampayo@fl_csampayo_r400
Updated ststus for tests:
r400vgt_real_time_events_04
r400vgt_real_time_events_05
Change 72591 on 2002/12/19 by beiwang@bei_depot
Copied over white box testing item from testenv/verification/MC MH Test Plan.doc
Added in color preliminary thoughts of how to implement these tests/checks/monitors.
Change 72541 on 2002/12/19 by ashishs@fl_ashishs_r400_win
update
Change 72527 on 2002/12/19 by smoss@smoss_crayola_win
SU tests
Change 72526 on 2002/12/19 by jasif@jasif r400 win tor
Added mono_colour_reg_test, misc_reg_test, ovsc_col_sel1, ovsc_col_sel2, and
ovsc col sel3.
Change 72483 on 2002/12/19 by jiezhou@cn jiezhou
small update
Change 72481 on 2002/12/19 by mdoggett@mdoggett_r400_win_platypus
Changed formats 50, 51, 52, 53 in format conversion table. Added format 51 to source
address table.
Added 3D linear L1 Tag, removed 3D noise L1 Tag.
```

```
Change 72477 on 2002/12/19 by jhoule@MA JHOULE
Renamed lod to lod_comp in the pseudocode
Change 72429 on 2002/12/19 by csampayo@fl csampayo lt r400
Closed bug# 70
Change 72392 on 2002/12/19 by kcorrell@kcorrell r400 docs marlboro nb
updated implementation description
Change 72323 on 2002/12/18 by gregs@laptop1
added speed sensor register
Change 72297 on 2002/12/18 by gregs@laptop1
re-arranged analog and other display pads
Change 72284 on 2002/12/18 by jacarey@fl jcarey desktop
AlphaBlend PM4 Packet Update
1. Microcode Updates
2. Documentation Updates
3. Unit Test
Change 72262 on 2002/12/18 by jhoule@MA_JHOULE
LOD computation update, with more complete anisotropy.
Explanation of clamping, which must be done after LOD biases are applied, itself done
after all of the specified pseudo-code.
Also updated some Visio links, but some are screwed up =(
Change 72248 on 2002/12/18 by jacarey@fl jcarey desktop
Add note for holding "event triggered" on the visio diagram.
Change 72164 on 2002/12/18 by jacarey@fl_jcarey_desktop
Add register to arm signal to mask false falling/rising edge triggering.
Change 72149 on 2002/12/18 by smoss@smoss crayola win
SU tests
```

```
Change 72082 on 2002/12/18 by csampayo@fl_csampayo_r400
Updated test status and test_list for the following tests:
r400cl_clip_edgeflags_frustum_corners_01
r400cl_clip_edgeflags_frustum_corners_02
Change 72057 on 2002/12/18 by jasif@jasif r400 win tor
Updated.
Change 71957 on 2002/12/17 by gregs@gregs_r400_win_marlboro
new order of Toronto pads
Change 71955 on 2002/12/17 by gregs@gregs_r400_win_marlboro
added DEBUG_legacy_test_en signal
Change 71837 on 2002/12/17 by gregs@gregs r400 win marlboro
update
Change 71819 on 2002/12/17 by smoss@smoss crayola win
SU tests
Change 71728 on 2002/12/17 by lseiler@lseiler_r400_win_marlboro
Fixed a bug in address.c for computing 3D tiled addresses (the spec had it right) and
in finding the 3d Y address for a device address (both address.c and the spec were
wrong)
Change 71718 on 2002/12/17 by csampayo@fl csampayo r400
Some housekeeping
Change 71667 on 2002/12/17 by jacarey@fl jcarey desktop
Add AA Font Micrococode
Add associated unit-level test
Update PM4 Spec for AA_Font and AlphaBlend PM4 Packets
Change 71577 on 2002/12/16 by vgoel@fl_vgoel2
added bug 957
Change 71575 on 2002/12/16 by scroce@scroce_r400_win_marlboro
```

Updated for new tests written Change 71562 on 2002/12/16 by $gregs@gregs_r400_win_marlboro$ update Change 71536 on 2002/12/16 by csampayo@fl csampayo r400 Added Bug# 101 and 102 Change 71459 on 2002/12/16 by jiezhou@cn_jiezhou make the viewport size smaller Change 71390 on 2002/12/16 by rbell@rbell_crayola_win_cvd More updates for full chip sims Change 71336 on 2002/12/15 by scroce@scroce_r400_home Updated tests that were recently written Change 71334 on 2002/12/15 by gregs@laptop1 fixed DEF file generation Change 71291 on 2002/12/15 by gregs@laptop1 added fake connections to memory pads Change 71194 on 2002/12/13 by ashishs@fl_ashishs_r400_win updated for change # 71014 by mmang Change 71184 on 2002/12/13 by csampayo@fl csampayo lt r400 Updated status for the following tests: r400su_polymode_culling_face_01 r400su polymode culling face 02 r400su_polymode_lines_degen_triangle_03 Change 71169 on 2002/12/13 by rfisette@rfisette Updated TST block spec to reflect ports in the IODFT block Change 71138 on 2002/12/13 by gregs@gregs r400 win marlboro IO<->MC interface cleaned (the interface is not functional).

```
Change 71137 on 2002/12/13 by gregs@gregs_r400_win_marlboro
< ROM_ON_VIP straps changed >
Change 70998 on 2002/12/13 by rherrick@ma_rherrick_crayola
New deposit... Turning over to Steve for an edit...
Change 70939 on 2002/12/13 by jiezhou@cn jiezhou
Add in SCL stress tests
Change 70929 on 2002/12/13 by jacarey@fl_jcarey_desktop
Clarify that "dummy" dwords in the ib prefetch* packets are set to 0xdeadbeef
by the Pre-Fetch Parser.
The emulator is being updated to match the RTL.
Change 70842 on 2002/12/12 by csampayo@fl csampayo3 r400
Some housekeeping
Change 70691 on 2002/12/12 by smoss@smoss crayola win
update for new tests
Change 70670 on 2002/12/12 by jiezhou@cn_jiezhou
Add detailed discription for Frame rate conversion test "SCL_VIDCAP_frame_rate_conv"
Change 70564 on 2002/12/11 by gregs@laptop1
ROM ON VIP straps changed to 0011
Change 70479 on 2002/12/11 by mzhu@mzhu crayola win tor
Add description for CRTC_TRIG_OCCURRED and CRTC_TRIG_INTERRUPT
Change 70453 on 2002/12/11 by vgoel@fl_vgoel2
added bug 928 and closed bug 898
Change 70436 on 2002/12/11 by jhoule@MA JHOULE
```

Described serialize heuristic for both ALU and TEX instructions.

```
Change 70411 on 2002/12/11 by rbell@rbell_crayola_win cvd
Added EXCLUDE_PRIMLIB for primlib tests
Change 70337 on 2002/12/11 by rbell@rbell crayola win cvd
Removed HDCP env var settings
Change 70324 on 2002/12/11 by mdoggett@mdoggett r400 win platypus
Updated format 29 in L2 cacheline format conversion table required adding new SM10 and
SM11.
Change 70285 on 2002/12/11 by ashishs@fl_ashishs_r400_win
updated count for frustum clip block. CHECKPOINT for test tracker for CL/VTE
Change 70281 on 2002/12/11 by ashishs@fl ashishs r400 win
updated the test tracker. Increased the count for blocks where new tests were added. As
of this checking the tests required match up the tests required in the approach plan.
Change 70269 on 2002/12/11 by rherrick@ma rherrick crayola
Updated Register Write section...
Change 70230 on 2002/12/10 by gregs@gregs_r400_win_marlboro
update
Change 70229 on 2002/12/10 by gregs@gregs_r400_win_marlboro
<ROM ON VIP strap is 0101 >
Change 70221 on 2002/12/10 by csampayo@fl csampayo r400
Updated status of VGT tests r400vgt real time events 02, 03
Some housekeeping
Change 70128 on 2002/12/10 by gregs@gregs_r400_win_marlboro
update
Change 69936 on 2002/12/10 by jowang@jowang_R400_win
1 test in manual ratio / accum init
2 tests in CRC generation
1 test in mode change
```

```
1 test in black pixel / line generation
Change 69929 on 2002/12/10 by scroce@scroce_r400\_win\_marlboro
Added test lists
Change 69887 on 2002/12/10 by rherrick@ma rherrick crayola
Turning it over to Steve for the next update...
Change 69867 on 2002/12/10 by moev@P4CLIENT=moev_r400_sun_marlboro
Spread sheet describing port interfaces between system blocks,
      TST block and IO.
Change 69865 on 2002/12/10 by rherrick@ma rherrick crayola
New update including Multiple Client random test coverage
Change 69847 on 2002/12/10 by scroce@scroce_r400_home
Added some test names
Change 69780 on 2002/12/09 by rherrick@ma_rherrick_crayola
More details included... Still missing multiple client random section and a review of
the DRAM/RBBM features...
Change 69736 on 2002/12/09 by scroce@scroce_r400_win_marlboro
Added test tallies
Change 69684 on 2002/12/09 by rthambim@rthambim r400 win tor
Initial revision.
Change 69683 on 2002/12/09 by rthambim@rthambim r400 win tor
Updated the strap table.
Change 69583 on 2002/12/09 by rherrick@ma_rherrick_crayola
Checkpoint on the MC testplan for Steve Croce to use...
Change 69544 on 2002/12/08 by gregs@laptop1
```

removed MODE DDC2CLK

```
Change 69460 on 2002/12/07 by gregs@laptop1
added comments on ROM_PORT usage.
Change 69270 on 2002/12/06 by mdoggett@mdoggett_r400_win_platypus
Table of contents, figures and tables updated.
Change 69217 on 2002/12/06 by gregs@laptop1
added delay chains
Change 69208 on 2002/12/06 by mdoggett@mdoggett_r400_win_platypus
Version 0.36.
Corrected labeling of SA10 to SA9.
Corrected positions of sectors for SM7 and SM8.
Updated TCA, TCB and TCO block diagrams and descriptions to match current hardware.
Change 69151 on 2002/12/06 by rherrick@ma_rherrick_crayola
Update environment spec to be closer to reality... Included randomization controls
section...
Change 69066 on 2002/12/06 by jacarey@fl jcarey2
Clarify Ring Buffer Size in DWORDs.
Change 68997 on 2002/12/05 by gregs@gregs\_r400\_win\_marlboro
update
Change 68985 on 2002/12/05 by vgoel@fl vgoel2
added bug 898
Change 68982 on 2002/12/05 by rthambim@rthambim r400 win tor
Initial revision.
Change 68965 on 2002/12/05 by lchen@lchen_crayola0
fix the DIFFSTR name
Change 68962 on 2002/12/05 by lchen@lchen crayola0
```

update the spec based on discussions with BOB

```
Change 68961 on 2002/12/05 by jasif@jasif\_r400\_win tor
Updated register settings of vcountBy2 and seqpclkby2 testcases.
Change 68928 on 2002/12/05 by ashishs@fl ashishs r400 win
added bug for r400cl edgeflags 05/06/07
Change 68917 on 2002/12/05 by vgoel@fl vgoel2
updated to added bug 897
Change 68908 on 2002/12/05 by ashishs@fl_ashishs_r400_win
updated
Change 68825 on 2002/12/05 by dglen@dglen_r400
Added 30 bpp option to progressive YPbPr timings
Change 68775 on 2002/12/05 by ashishs@fl ashishs r400 win
cancelled 2 tests from the Approach plan and updated tracker since were redundant
tests :
1. r400cl frustum simple 01(tcl clip frustum simple 01)
2. r400cl_frustum_simple_02(tcl_clip_frustum_simple_02)
Change 68762 on 2002/12/05 by scamlin@scamlin crayola win
12/4/2002 area update for orlando blocks
Change 68506 on 2002/12/04 by rherrick@ma rherrick crayola
I hope I waited long enough for the file to write out befire submitting... (I didn't
last time)...
Change 68503 on 2002/12/04 by rherrick@ma rherrick crayola
Updated Table of Contents...
Change 68499 on 2002/12/04 by rherrick@ma_rherrick_crayola
First pass at permutations of surface accesses...
Change 68439 on 2002/12/04 by rherrick@ma rherrick crayola
Beginning of MH Testplan... NOT READY FOR CONSUMPTION!!
```

```
Change 68428 on 2002/12/04 by jacarey@fl_jcarey_desktop
Fix Typo in Cond_Write Packet in PM4 Spec.
Change 68327 on 2002/12/04 by jacarey@fl jcarey desktop
Update Alignment of the Ring, Indirects, and Real-Time Bases
Change 68323 on 2002/12/04 by rherrick@ma rherrick crayola
Further described the DC client characterization with the MH queues and RB queues...
Change 68322 on 2002/12/04 by rherrick@ma_rherrick_crayola
Feedback from Testplan review (December 3, 2002) incorporated into document...
Sections still needing detail include the DRAM Tuning register verification support,
power management verification support, and IKOS parameter verification support.
Change 68167 on 2002/12/03 by frising@ma_frising
v.0.99d
-Update FLOOR opcodes to match r400 shaders.doc v.1.91.
-Updated LIT macro
Change 68164 on 2002/12/03 by marklee@marklee_crayola
2nd attempt at changing permissions
Change 68162 on 2002/12/03 by marklee@marklee_crayola
delete
Change 68160 on 2002/12/03 by marklee@marklee crayola
attempt to change permissions
Change 68148 on 2002/12/03 by gregs@gregs_r400_win_marlboro
update
Change 68144 on 2002/12/03 by frising@ma_frising
v.1.91
-FLOOR opcode was not producing correct results for negative 'integer' inputs.
Changed from:
```

```
FLOOR:
If (SrcA < 0.0f)
 Result = TRUNC(SrcA) + -1.0f;
 Result = TRUNC(SrcA)
To:
FLOOR:
Result = TRUNC(SrcA)
If ( (SrcA < 0.0f) && (SrcA != Result) )</pre>
 Result += -1.0f;
-Note that emulator was calling math library floor function so this should not be an
emulation issue.
Change 68140 on 2002/12/03 by marklee@marklee crayola
check in global clocks diagram for Eric N.
Change 68139 on 2002/12/03 by marklee@marklee crayola
check in this file for Eric N.
Change 68133 on 2002/12/03 by gregs@gregs_r400_win_marlboro
update
Change 68062 on 2002/12/03 by jiezhou@cn_jiezhou
change DMIF stress tests active size from 2560x64 to 2560x16
Change 68048 on 2002/12/03 by scroce@scroce_r400_win_marlboro
Added a line
Change 68034 on 2002/12/03 by rherrick@ma rherrick crayola
Initial Deposit... Describes Black Box MC Verification requirements...
Change 67940 on 2002/12/02 by mearl@mearl_r400_win
fixed the offset problem
Change 67933 on 2002/12/02 by frising@ma_frising
```

-While we don't allow CLI relative addressing into the export file on r400, future chips based on r400 may. This check-in moves the export masking behavior bit (bit[6] of vector destination pointer) to bit[14] (bit[6] of scalar destination pointer). Bit[6] of vector destination pointer now controls logical vs. CLI relative addressing into the register or export file. When exporting, this is a Must Be Zero (logical) field for for software on r400. This will provide binary compatibility.

-Software will need to coordinate this change with emulator release.

Change 67917 on 2002/12/02 by ctaylor@fl ctaylor r400 win marlboro

Add Multipass Pixel Shader Description.

Change 67873 on 2002/12/02 by kcorrell@kcorrell_r400_docs_marlboro_nb

update, especially in the implementation section

Change 67866 on 2002/12/02 by jiezhou@cn jiezhou

initial release

Change 67842 on 2002/12/02 by mkelly@fl_mkelly_r400_win_laptop

Delete test requirement for rect_v0-v3, covered in CP legacy tests

Change 67834 on 2002/12/02 by jacarey@fl jcarey desktop

Remove ME_HALT and ALU_COUT32 Booleans

Change 67779 on 2002/12/02 by ashishs@fl ashishs r400 win

updated

Change 67702 on 2002/11/30 by gregs@gregs r400 win cc

 $\mathtt{W45B512/012},\ \mathtt{SST45LF010},\ \mathtt{and}\ \mathtt{ROM}\ \mathtt{on}\ \mathtt{VIP}\ \mathtt{straps}\ \mathtt{changed}.$

Change 67647 on 2002/11/30 by gregs@gregs_r400_win_cc

updated memory clock domain - work in progess.

Change 67590 on 2002/11/29 by sbagshaw@sbagshaw

added new document sections and reorganized existing document to new section headings

Change 67572 on 2002/11/29 by dglen@dglen_r400

```
Added some IBM Bertha panel cases
Change 67519 on 2002/11/28 by dglen@dglen_r400
Added lots of detail for all TV timings, all panel and projector timings except IBM
T221.
Change 67376 on 2002/11/27 by bbloemer@ma bbloemer
Update.
Change 67343 on 2002/11/27 by tshah@fl_tshah
typo fix in EXTERN_TRIG_CNTL register
Change 67276 on 2002/11/27 by jhoule@MA_JHOULE
Updated with more optimal values (easier precision to reach in hardware).
Change 67275 on 2002/11/27 by jhoule@MA JHOULE
Updated packing scheme.
Change 67273 on 2002/11/27 by mkelly@fl mkelly r400 win laptop
Verify SU_SC_MODE persp corr disable
Change 67258 on 2002/11/27 by bbloemer@ma_bbloemer
First draft of IO pad functional spec.
Change 67215 on 2002/11/27 by jowang@jowang R400 win
updated start phase
Change 67172 on 2002/11/27 by smoss@smoss crayola win
update
Change 67066 on 2002/11/26 by gregs@gregs_r400_win_marlboro
update
Change 67058 on 2002/11/26 by frising@ma frising
v.1.60
-add MAG ANISO WALK and MIN ANISO WALK fields to texture constant to conform to D3D.
```

```
Here's how it works:
```

programmed through constant.

 ${\tt MAG_ANISO_WALK}$ controls if aniso walk is done when anisotropy filter is enabled and magnifying.

 ${\tt MIN_ANISO_WALK}$ controls if aniso walk is done when anisotropy filter is enabled and minifying.

ANISO_FILTER still controls if anisotropy is enabled. When enabled the minor axis controls the LOD calculation so having MAG_ANISO_WALK and MIN_ANISO_WALK disabled while having ANISO_FILTER enabled is allowed. When ANISO_FILTER is disabled, MAG_ANISO_WALK and MIN_ANISO_WALK are ignored.

This allows the anisotropy walk to be completely orthogonal to mag and mig filters meaning we support anisotropy walking with point, linear and arbitrary filters min/mag filters.

This is actually more powerful than the D3D API. D3D drivers should program the HW as follows to be compliant with the refrast:

```
if ( (mag==ansio) || (min==aniso) ) {
 ANSIO FILTER = enabled, max set as specified.
  if (mag==aniso) {
   MAG ANISO WALK = enabled;
   MAG FILTER = linear;
  } else {
   MAG ANISO WALK = disabled;
   // program MAG FILTER as usual
 if (min==aniso) {
   MIN ANISO WALK = enabled;
   MIN FILTER = linear;
  } else {
   MIN ANISO WALK = disabled;
    // program MIN FILTER as usual
} else {
 ANISO FILTER = disabled;
  // program MAG_FILTER and MIN_FILTER as usual
Other notes:
-MAG ANISO WALK and MIN ANISO WALK are not available in instruction word and must be
```

-MAG ANISO WALK and MIN ANISO WALK are forced to 1 (enabled) when anisotropy is enabled

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```
for FetchMultiSample.
Change 66971 on 2002/11/26 by gabarca@gabarca_crayola_win_cvd
The prevention of negatifve oversan is only done if one or both displays are in VGA
timing
Change 66688 on 2002/11/25 by mkelly@fl_mkelly_r400_win_laptop
Update SC HW coords tests...
Change 66670 on 2002/11/25 by gabarca@gabarca_crayola_win_cvd
VGA DISP interface signals change to avoid negative overscan
Change 66640 on 2002/11/25 by jasif@jasif r400 win tor
Updated.
Change 66603 on 2002/11/25 by ashishs@fl_ashishs_r400\_win
updated
Change 66550 on 2002/11/24 by gregs@laptop1
update
Change 66367 on 2002/11/22 by csampayo@fl csampayo r400
Updated test list and test tracker for the following tests:
r400vgt_real_time_events_01
r400vgt real time events 02
Change 66356 on 2002/11/22 by gregs@gregs r400 win marlboro
Friday update
Change 66347 on 2002/11/22 by sbagshaw@sbagshaw
Revised 0.5 DC System testplan based on feedback from meetings and
wrote detailed test descriptions and procedures for many tests.
Change 66283 on 2002/11/22 by jiezhou@cn_jiezhou
Add two more tests and more parameter settings.
```

Change 66270 on 2002/11/22 by rfisette@rfisette_r400_sun_marlboro

```
Design specification for the Test Controller (TST) block.
Change 66256 on 2002/11/22 by gregs@gregs\_r400\_win\_marlboro
<fixed R300 number of instances value >
Change 66176 on 2002/11/22 by jacarey@fl jcarey desktop
Update Address Mask for Reg RMW PM4 Packet.
  Associated Documentation Updated
Change 66168 on 2002/11/22 by mkelly@fl_mkelly_r400_win_laptop
Close a bug...
Change 66127 on 2002/11/21 by gabarca@gabarca crayola win cvd
de skew should only affect h disp start
Change 66124 on 2002/11/21 by gregs@gregs\_r400\_win\_marlboro
update
Change 66118 on 2002/11/21 by dglen@dglen r400
Updated with some new modes for digital TV.
Added V start phase for progressive.
Change 66089 on 2002/11/21 by csampayo@fl_csampayo_r400
Added bug# 97
Change 66088 on 2002/11/21 by jowang@jowang R400 win
updated with a column for required # of taps
Change 66034 on 2002/11/21 by mzhu@mzhu crayola win tor
Add LB_DATA_GAP_BETWEEN_CHUNKS
Change 66006 on 2002/11/21 by jacarey@fl_jcarey_desktop
Update to Reg_RMW Packet...Streamlined Thanks to Harry...
Change 65997 on 2002/11/21 by gregs@gregs_r400\_win\_marlboro
update
```

Change 65972 on 2002/11/21 by jiezhou@cn jiezhou minor text updated Change 65964 on 2002/11/21 by mkelly@fl mkelly r400 win laptop Refresh for tommorow's status meeting... Change 65958 on 2002/11/21 by frising@ma frising v.1.59 -A marco that computed texture constant offsets somehow got corrupted with the 1.58 check-in causing offsets to be off by one. Folks should move to this version immediately. Sorry. Thanks to John Carey for catching this. Change 65950 on 2002/11/21 by jacarey@fl jcarey desktop Add Reg RMW (Read/Modify/Write) to the PM4 Packets Documentation Update Associated Unit-Level Test Change 65863 on 2002/11/21 by jacarey@fl jcarey desktop Revert B7 2D Boolean Setting. It is only set based on the src type==5 1. Emulator Update to CP 2. Verilog Update to Micro Engine 3. Remove Unit Test 4. Update CP Documentation Change 65731 on 2002/11/20 by dglen@dglen r400 Minor clean up Change 65722 on 2002/11/20 by dglen@dglen_r400_dell Major update of formulas. Corrected many TV timings. Change 65679 on 2002/11/20 by sbagshaw@sbagshaw added block select addresses for BIF debug blocks added placeholders for lists of BIF debug values on debug bus

Rename two fields in the RBBM_Status Register.

Change 65637 on 2002/11/20 by jacarey@fl jcarey desktop

Block Name	Machine #	Tests	#ExpectedRuns	#Runs	#Fail	#Pass	#NotRun #	NoGold
#NoRef #Error Passing %								
cl	FL_JOHNC	3	3	3	0	3	0	0
0	0 100.00%	i						
ср	FL_JOHNC	12	12	12	0	12	0	0
0	0 100.00%	i .						
perf	FL_JOHNC	3	3	3	0	3	0	0
0	0 100.00%	į.						
quickemu	FL_JOHNC	16	16	16	0	16	0	0
0	0 100.00%	i						
rb	FL_JOHNC	7	7	7	0	7	0	0
0	0 100.00%	į.						
sc	FL_JOHNC	20	20	20	0	20	0	0
0	0 100.00%	ŝ						
su	FL_JOHNC	3	3	3	0	3	0	0
0	0 100.00%	ŝ						
vgt	FL_JOHNC	3	3	3	0	3	0	0
0	0 100.00%	5						
vte	FL_JOHNC	1	1	1	0	1	0	0
0	0 100.00%	i						

Change 65599 on 2002/11/20 by csampayo@fl_csampayo_r400

Some VGT housekeeping

Change 65588 on 2002/11/20 by jacarey@fl_jcarey_desktop

8bpp-to-16bpp TLU Issue for 2D

Change 65570 on 2002/11/20 by rbell@rbell_crayola_win_cvd3

Added CP to the chip_vidfull conf

Change 65561 on 2002/11/20 by rbell@rbell crayola win cvd3

Added a section for Video IP fullchip sims

Change 65539 on 2002/11/20 by rthambim@rthambim_r400_win_tor

Fixed syntax in naming.

Change 65537 on 2002/11/20 by $rthambim@rthambim_r400_win_tor$

Added 3gio ports.

```
Change 65500 on 2002/11/20 by jiezhou@cn_jiezhou
initial release
Change 65351 on 2002/11/19 by csampayo@fl csampayo r400
Closed bug# 73
Change 65312 on 2002/11/19 by frising@ma frising
v.0.99c
-change R400 FP NAN to 0xFFC00000 (from 0x7FC00000) to match intel for indefinite
floating point operations.
Change 65310 on 2002/11/19 by vgoel@fl_vgoel2
updated to include bug 788
Change 65307 on 2002/11/19 by vgoel@fl_vgoel2
updated for number of HOS tests written
Change 65303 on 2002/11/19 by nluu@nluu_r400_doclib_cnnb
- update
Change 65297 on 2002/11/19 by nluu@nluu_r400_doclib_cnnb
- update
Change 65274 on 2002/11/19 by mkelly@fl_mkelly_r400_win_laptop
Update regress_e tests...
Change 65267 on 2002/11/19 by mkelly@fl_mkelly_r400_win_laptop
Update local Orlando bug tracking matrix...
Change 65263 on 2002/11/19 by ashishs@fl ashishs r400 win
updated
Change 65254 on 2002/11/19 by vgoel@fl_vgoel2
added second export related bug
Change 65237 on 2002/11/19 by sbagshaw@sbagshaw
```

Updated DC Debug Bus document to include 3 changes that are necessary for AUTOREG generated block files. Updated indirect debug register allocations for each major subblock in DC Updated debug trigger logic descriptions for value and edge pattern triggering functionality Change 65234 on 2002/11/19 by csampayo@fl csampayo r400 Added 3 new VGT tests and updated test list and test tracker accordingly Change 65229 on 2002/11/19 by vgoel@fl_vgoel2 added bug 785 Change 65172 on 2002/11/19 by mpersaud@mpersaud_r400_win_tor ${\tt Added\ DCCIF_clk_on\ description.}$ Change 65072 on 2002/11/18 by jowang@jowang R400_win update with interlaced nomeclature Change 65066 on 2002/11/18 by gregs@gregs r400 win marlboro <rev 8.0 - dft > Change 65042 on 2002/11/18 by imuskatb@imuskatb_r400_win_cnimuskatb updated test doc Change 64983 on 2002/11/18 by jowang@jowang_R400_win updated with more M3 tests and testlist Change 64857 on 2002/11/18 by jacarey@fl_jcarey_desktop RB BLENDCONTROL.Color Dither Mode is set to DITHER LUT for GradFill packets where the DST_TYPE != 32bpp. Change 64852 on 2002/11/18 by jasif@jasif_r400_win_tor Updated. Change 64849 on 2002/11/18 by sbagshaw@sbagshaw added new column for test type -- chip level or chip and block level added more test descriptions.

```
Change 64846 on 2002/11/18 by jasif@jasif_r400_win_tor
Updated.
Change 64833 on 2002/11/18 by jacarey@fl jcarey desktop
Add note for ME RTS generation for read operations initiated by the micro engine.
Change 64829 on 2002/11/18 by ashishs@fl ashishs r400 win
added triangles with edgeflags and texture test to the tracker
Change 64701 on 2002/11/16 by gregs@laptop1
update
Change 64590 on 2002/11/15 by donaldl@fl_donaldl_p4
Added sc packer debug bus (DEBUG_PKR_0).
Change 64571 on 2002/11/15 by gregs@gregs r400 win marlboro
update
Change 64546 on 2002/11/15 by sbagshaw@sbagshaw
Debug document modified to include interface to 12 bit debug bus value and enable
directly from DC block.
Change 64447 on 2002/11/15 by vgoel@fl_vgoel2
updated for HOS tests written so far
Change 64418 on 2002/11/15 by frising@ma frising
v.1.89
-show FRACT instructions being implemented as: SRC + -FLOOR(SRC)
-This should now sync the instructions with v.0.99b of numerics doc.
Change 64403 on 2002/11/15 by frising@ma_frising
v.0.99b
-checkpoint
--implement shader pipe instructions is WZYX order.
--fix a couple typos
--start sync to v.1.89 of shader pipe spec.
```

```
Change 64389 on 2002/11/15 by jasif@jasif_r400_win_tor
Updated.
Change 64381 on 2002/11/15 by frising@ma frising
v.1.88
-specify that Result.X of CUBE instruction returns 2.0f * MajorAxis instead of max to
avoid confusion. See numerics doc for details of CUBE instruction.
-specify function of all instructions in WZYX order. Nothing changing here; it's just
for spec consistency (and happens to reflect the actual order of operations in the
shader pipe hardware).
Change 64379 on 2002/11/15 by gabarca@gabarca_crayola_win_cvd
Mode 13, mode 62, mode X have ATTR PCLKBY2 = 1
Change 64309 on 2002/11/15 by mkelly@fl mkelly r400 win laptop
Log an SC bugzilla on color prob on prim edges...
Change 64144 on 2002/11/14 by jacarey@fl jcarey desktop
1. RTL Update to Set 2D Boolean B0 for LUT Color Sources
2. CP Spec Updates for #1
3. CP Spec Update for the CP_DMA_STAT Register
Change 64064 on 2002/11/14 by mkelly@fl_mkelly_r400_win_laptop
Update local, Orlando bug tracking info....
Change 64050 on 2002/11/14 by vgoel@fl vgoel2
updated
Change 64022 on 2002/11/14 by mkelly@fl mkelly r400 win laptop
Add textured line to regress_e
Change 64000 on 2002/11/14 by gregs@gregs_r400_win_marlboro
< fixed some wire in DVO interface >
Change 63978 on 2002/11/14 by jasif@jasif_r400_win_tor
```

Updated. Change 63959 on 2002/11/14 by gabarca@gabarca_crayola_win_cvd split the DisplayEnable test in three Change 63920 on 2002/11/14 by grayc@grayc r400 win needs to be updated ... will add back in later Change 63819 on 2002/11/13 by dglen@dglen_r400_dell Major update to outline. VGA block spec is now best source for details. Change 63811 on 2002/11/13 by csampayo@fl_csampayo_r400 Added bug# 87 Change 63793 on 2002/11/13 by gregs@gregs r400 win marlboro added CGM clock monitoring pin Change 63776 on 2002/11/13 by csampayo@fl csampayo r400 Closed bug# 86 Change 63751 on 2002/11/13 by jasif@jasif_r400_win_tor Updated. Change 63732 on 2002/11/13 by frising@ma_frising v.1.87 -when using absolute constant addressing all constants in instruction are absolute. This allows compiler to easily perform mov operations on absolute constants. -Document instruction word in WZYX order (i.e. high bits to low bits). Documentation issue only. -lots more work cleaning up instruction word documentation (please study). -It may not have been clear in the past but indexing of exports is not permitted. This update should make that obvious.

-removed following export restriction which no longer applies: '1) When doing a Scalar export of 'pixels' or 'position', only the 'W' component will contain the scalar result. The other 3 components will be expanded to 0.0. When exporting to 'parameters'

Users should just use the scalar and vector destination masks appropriately to achieve whatever result they want. -when exporting, bit 6 in instruction word now controls masking behavior during parameter exports when both scalar and vector masks for a component are 0. See table 3.2.1.4 Change 63680 on 2002/11/13 by jacarey@fl jcarey desktop ${\tt Im_Load} \ \, {\tt and} \ \, {\tt Im_Load_Immediate} \ \, {\tt packets} \ \, {\tt write} \ \, {\tt the} \ \, {\tt SQ_PROGRAM} \ \, {\tt register} \ \, {\tt for} \ \, {\tt real-time}$ shader code updates. This is documented in the PM4 spec now. Change 63675 on 2002/11/13 by gregs@gregs r400 win marlboro <TEST MCLK tste bug fixed > Change 63654 on 2002/11/13 by beiwang@bei_depot Updated for mc client intfc block AGP/Multi-Sample functionality as well as more details for Protocol engine Change 63653 on 2002/11/13 by mzhu@mzhu crayola win tor Update the 3rd milestone tests Change 63604 on 2002/11/13 by donaldl@fl_donaldl_p4 Initial -- Debug bus, bit definitions. Change 63562 on 2002/11/12 by gregs@laptop1 ccc Change 63552 on 2002/11/12 by csampayo@fl csampayo lt r400 Updated test list and test tracker for the following tests: r400vgt_multi_pass_pix_shader_07 r400vgt_multi_pass_pix_shader_08 Change 63509 on 2002/11/12 by frising@ma_frising v.1.86 -add note that Constant0 refers to the first constant in the instruction while

Constant1 and Constant2 refer to the second and third constants in the instruction

the scalar result is put into all 4 components.'

respectively.

- -added note that the GPR write-back table rules only apply when the scalar and vector destination pointers are the same. This should be obvious, but clarity never hurts.
- -when doing an export and both scalar and vector channels are masked a 0.0f is now generated.
- -updated Exports Types and Addresses section to match what is in SQ doc.
- -tried to clean-up export rules section.
- -removed previous vector and previous scalar from source selects in instruction word.
- -added clamping code to LOG_CLAMPED instruction.
- -fixed a bunch of typos and other misc clean-up including a couple places where I was mixing ABGRs with my WZYXs in the instruction definitions. Tried to be consistent when referring to bits in instruction word.

Change 63500 on 2002/11/12 by csampayo@fl csampayo lt r400

Some housekeeping

Change 63490 on 2002/11/12 by jacarey@fl_jcarey_desktop

Add Write Confirm Signals to CP_STAT Register

Change 63478 on 2002/11/12 by rramsey@RRAMSEY_P4_r400_win

Update quadorder drawing and add it to the sc spec

Change 63454 on 2002/11/12 by ashishs@fl ashishs r400 win

update

Change 63447 on 2002/11/12 by mzhu@mzhu crayola win tor

Update 11.16 Cursor_Cntl

Change 63398 on 2002/11/12 by ctaylor@fl_ctaylor_r400_win_marlboro

Adding SC visio and xls files for documentation

Change 63336 on 2002/11/12 by jacarey@fl_jcarey_desktop

Baseline Debug Documents for the CP and RBBM

```
Change 63285 on 2002/11/11 by peterp@MA_PETE_LT
Added common format to CG, ROM, DBG
Change 63274 on 2002/11/11 by csampayo@fl csampayo r400
Closed bug# 83
Change 63262 on 2002/11/11 by gregs@gregs r400 win marlboro
backup of drawings
Change 63258 on 2002/11/11 by gregs@gregs_r400_win_marlboro
update
Change 63197 on 2002/11/11 by rramsey@RRAMSEY_P4_r400_win
details intra-tile quad processing order when pa su sc model cntl.QUAD ORDER ENABLE is
set
Change 63189 on 2002/11/11 by peterp@MA PETE LT
Added common format for MC and MH
Change 63174 on 2002/11/11 by peterp@MA_PETE_LT
Added common format to cp and rbbm
Change 63155 on 2002/11/11 by jacarey@fl_jcarey_desktop
Add CP RT STAT register to spec.
Change 63149 on 2002/11/11 by jowang@jowang R400 win
add full/empty tests
Change 63148 on 2002/11/11 by gabarca@gabarca_crayola_win_cvd
Added VGA_DISP_sync_en
Change 63098 on 2002/11/11 by jacarey@fl_jcarey_desktop
1. Performance Signals for RTEE
2. Split Busy Signal from the CSF into a real-time and non-real-time version
```

Change 63094 on 2002/11/11 by jacarey@fl_jcarey_desktop

- 1. Add register to micro engine guts for timing
- 2. Add FIFOs for Timing in the Synchronization Logic
- 3. Update CP's Performance Counter Selects in perfcount.doc

Change 63077 on 2002/11/11 by sbagshaw@sbagshaw

Revision 0.35 of R400 DC (Toront) Test Plan for System and Stress tests

Change 63062 on 2002/11/11 by jasif@jasif r400 win tor

Updated

Change 63053 on 2002/11/11 by mpersaud@mpersaud_r400_win_tor

Added debug signals and WAIT/FREQUENCY/SIZE values to the dccif interface.

Change 62983 on 2002/11/09 by peterp@MA_PETE_LT

Added common format for Analog and BIF

Change 62925 on 2002/11/08 by jhoule@MA JHOULE

Latest uRF expand positionings for 16 or 32 bpp post-blender conversion (before fix2float convert, which happens on SP side).

First 2 sheets are current POR. Others are dropped alternatives.

Change 62910 on 2002/11/08 by csampayo@fl_csampayo_lt_r400

Updated status in test tracker and added to test_list: r400vgt_real_time_events_01

Change 62909 on 2002/11/08 by bbloemer@ma bbloemer

Added MC MH Test Plan

Change 62868 on 2002/11/08 by csampayo@fl csampayo lt r400

Added bug# 86. Some housekeeping

Change 62857 on 2002/11/08 by ${\tt mpersaud@mpersaud_r400_win_tor}$

Added VIP block select and group debug signals.

Change 62813 on 2002/11/08 by jacarey@fl_jcarey_desktop

- 1. Update CP Spec for Debug Signals
- 2. Update One of the 2D Unit Tests to Read Back Debug Information

```
Change 62808 on 2002/11/08 by mzhu@mzhu_crayola_win_tor
Update 3.4.9.4 Color Space Conversion
Change 62771 on 2002/11/08 by gregs@gregs\_r400\_win\_marlboro
update
Change 62759 on 2002/11/08 by mzhu@mzhu crayola win tor
Add DxCRTC_FLOW_CONTROL_POLARITY, DxCRTC_TRIG_INPUT_STATUS and
DxCRTC_TRIG_POLARITY_STATUS register bits
Change 62748 on 2002/11/08 by ashishs@fl_ashishs_r400_win
update
Change 62743 on 2002/11/08 by jacarey@fl jcarey desktop
Add RBBM BIF int to the RBBM's performance counters.
RTL and Spec Update.
Change 62732 on 2002/11/08 by mpersaud@mpersaud r400 win tor
Added state machine diagrams.
Change 62711 on 2002/11/08 by ashishs@fl ashishs r400 win
updated for last 3 vte tests viz r400vte_pos_neg_combos_01/02/03
Change 62511 on 2002/11/07 by imuskatb@imuskatb r400 win cnimuskatb
   updated
Change 62447 on 2002/11/07 by jacarey@fl jcarey desktop
Added note to RBBM spec regarding the performance counters.
Change 62444 on 2002/11/07 by jacarey@fl_jcarey_desktop
Updates for the CP_STAT register
Change 62432 on 2002/11/07 by gabarca@gabarca_crayola_win_cvd
added perf count signals
```

Change 62338 on 2002/11/07 by jasif@jasif r400 win tor

Updated Change 62301 on 2002/11/07 by csampayo@fl_csampayo_r400 Housekeeping update Change 62266 on 2002/11/07 by jacarey@fl_jcarey_desktop Updates for Soft Reset to Register Descriptions Change 62198 on 2002/11/06 by gregs@laptop1 <enter description hupdate ere> Change 62131 on 2002/11/06 by gabarca@gabarca_crayola_win_cvd One test in each set of the VGA to CRTC parameters section should do display capture. Tests in the display section normally do capture Change 62066 on 2002/11/06 by mpersaud@mpersaud r400 win tor added VIP_DISP_eof_fcp and VIP_DISP_pol_fcp to interface with DISP/CRTC Change 62062 on 2002/11/06 by peterp@MA_PETE_LT Added common synthesis report format to DC block. Combined DC and VIP results into the DC results. Change 62055 on 2002/11/06 by mzhu@mzhu_crayola_win_tor Update 3.4.9.4 Color Space Conversion Change 62037 on 2002/11/06 by mzhu@mzhu_crayola_win_tor Update constant matrix for TVRGB output in 11.18 Matrix Transform and Adjustment. Change 62033 on 2002/11/06 by lkang@lkang r400 win tor update on SCLK dynamic clocking Change 61984 on 2002/11/06 by beiwang@bei_depot Updated the bus interface to MH and RB

Change 61964 on 2002/11/06 by jacarey@fl_jcarey_desktop

```
Update Soft Reset Description
Change 61936 on 2002/11/06 by gabarca@gabarca_crayola_win_cvd
clarified grph pack in spreadsheet
Change 61912 on 2002/11/06 by jacarey@fl jcarey desktop
Update to GradFill Description in PM4 Spec
Change 61857 on 2002/11/05 by jasif@jasif_r400_win_tor
Change name of overscan test to overscanColourSelect.
Change 61850 on 2002/11/05 by jasif@jasif_r400_win_tor
Updated.
Change 61843 on 2002/11/05 by gregs@gregs r400 win marlboro
dft update
Change 61837 on 2002/11/05 by mzhu@mzhu crayola win tor
Update 3.4.9.4 Color Space Conversion
Change 61803 on 2002/11/05 by jacarey@fl_jcarey_desktop
Update format of the \operatorname{Grad}_{-}\operatorname{Fill} packet per discussion on 11\text{--}05\text{--}2002.
Change 61761 on 2002/11/05 by dwong@cndwong2
Added details on endian swap and an extra field for indirect buffer swap setting
Change 61728 on 2002/11/05 by gabarca@gabarca crayola win cvd
Added description of VESA mode tests
Change 61698 on 2002/11/05 by imuskatb@imuskatb r400 win laptop
   updated docs
Change 61664 on 2002/11/05 by gregs@gregs_r400_win_marlboro
adding id module + new straps
Change 61642 on 2002/11/05 by mzhu@mzhu_crayola_win_tor
```

```
Add one intermediate result fraction bit for Overlay Matrix Transform in chapter 11.6
and Matrix Transform and Adjustment in chapter 11.18
Change 61620 on 2002/11/05 by mzhu@mzhu_crayola_win_tor
add "Out SRGB->YCbCr" and "Out sRGB->TVRGB" for overlay pixels
Change 61592 on 2002/11/05 by vgoel@fl_vgoel2
updated to close bug 608
Change 61582 on 2002/11/05 by mpersaud@mpersaud r400 win tor
Added to source control
Change 61541 on 2002/11/04 by jasif@jasif r400 win tor
Updated.
Change 61526 on 2002/11/04 by rfevreau@rfevreau_r400_win
X2 Mag tests
Change 61518 on 2002/11/04 by jowang@jowang_R400_win
added back-to-back writes to HOST
Change 61484 on 2002/11/04 by dwong@cndwong2
added in performance counter
Change 61480 on 2002/11/04 by jacarey@fl jcarey desktop
Fix Typo in MPEG INDEX packet documentation.
Change 61470 on 2002/11/04 by peterp@MA_PETE_LT
\operatorname{VGT}, PA and SC updated with common format for area and synthesis date
Change 61467 on 2002/11/04 by grayc@grayc_r400_win
better debug statements
Change 61453 on 2002/11/04 by jacarey@fl_jcarey_desktop
Update MPEG Index Packet
1. Remove "Dummy" and "Mask" DWORDs
```

2. RectList primtype is assumed, so CP only outputs 3 indices (Original +2)

```
Change 61449 on 2002/11/04 by jasif@jasif_r400_win_tor
Updated
Change 61444 on 2002/11/04 by peterp@MA PETE LT
Updated SQ with common format of reporting area and synthesis date
Change 61429 on 2002/11/04 by bbloemer@ma bbloemer
Improved figure insertion, I hope.
Change 61416 on 2002/11/04 by jacarey@fl_jcarey_desktop
Update the Microcode RAM Size(s)
Change 61403 on 2002/11/04 by ashishs@fl ashishs r400 win
updated
Change 61360 on 2002/11/04 by imuskatb@imuskatb r400 win cnimuskatb
  updated
Change 61342 on 2002/11/04 by frising@ma_frising
-At request of SW merged TYPE/STATE fields in constants. These are SW only bits used
by PM4 capture utilities.
-Fixed 3D size typo, had width, height, height instead of width, height, depth
-Make addressing mode names consistent with SP; now have logical and current loop index
relative addressing
-Mark R400 DATA FORMAT 63 as reserved
-Clean up and clarify R400 DATA FORMAT Notes sections based on feedback
Change 61310 on 2002/11/04 by jacarey@fl jcarey desktop
Update per Lili Sinclair's E-mail.
Change 61187 on 2002/11/01 by mdoggett@mdoggett_r400_win_platypus
Added degamma dxt. Updated format table with new \_as\_16\_16\_16\_16 formats. Updated L2
cacheline format conversion table. Added degamma dxt section with equations for
calculating different dxt interpolations.
```

Change 61163 on 2002/11/01 by $ashishs@fl_ashishs_r400_win$

updated Change 61151 on 2002/11/01 by frising@ma_frising v.1.85 -clarifed how constant and register addressing works. For nomenclature I settled on absolute, logical and relative addressing. New tables added. -documented how constant2 works. -Wrote a blurb and added a table on GPR write-back precedence. -Cleaned up ALU instruction format table Change 61074 on 2002/11/01 by vgoel@fl_vgoel2 updated tracker for closed bugs Change 61068 on 2002/11/01 by gregs@gregs r400 win marlboro update Change 61055 on 2002/11/01 by gabarca@gabarca_crayola_win_cvd Added viewport X and Y start Change 61036 on 2002/11/01 by jacarey@fl_jcarey2 Update RBBM's Performance Counter Signal List Change 60996 on 2002/11/01 by nbarbier@nbarbier r400 win tor Updated GENERICA & GENERICB muxes. Added GENERICC pad to interface. Change 60992 on 2002/11/01 by peterp@MA_PETE_LT Synthesis results from SP/SX Change 60988 on 2002/11/01 by rthambim@rthambim r400 win tor Updated the strap table.

Change 60985 on 2002/11/01 by dwong@cndwong2

Added new clock enable signal - BIF_VGA_busy.

Change 60981 on 2002/11/01 by rthambim@rthambim_r400_win_tor

Added in xDCT performance counter details

```
Change 60937 on 2002/11/01 by mkelly@fl_mkelly_r400_win_laptop
Broken out line list cases from parameterized test
Update tracker
Change 60934 on 2002/11/01 by {\tt mpersaud@mpersaud\_r400\_win\_tor}
Rev 0.7 - Update port names to CP
Change 60913 on 2002/11/01 by peterp@MA PETE LT
Started entry of date field for synthesis results - corrected RB/RC area
Change 60910 on 2002/11/01 by jacarey@fl_jcarey2
Update CP's Performance Monitoring Signals.
Change 60859 on 2002/10/31 by beiwang@bei depot
Updated Protocol Engine Drawing
Change 60850 on 2002/10/31 by vgoel@fl vgoel2
updated with new bugs and closed dates for some bugs
Change 60825 on 2002/10/31 by gregs@gregs_r400_win_marlboro
update
Change 60810 on 2002/10/31 by csampayo@fl_csampayo_r400
Added new SU test, updated test list and test tracker accordingly
Change 60808 on 2002/10/31 by bbloemer@ma bbloemer
Updates for the design review.
Change 60786 on 2002/10/31 by mzhu@mzhu_crayola_win_tor
Update for re-organizing the MH data in read_buff module.
Add MH-DC interface signal list, MH return data format and DMIF output data format in
Appendix
Change 60768 on 2002/10/31 by jacarey@fl_jcarey_desktop
Fix Name of Signal From the RBBM.
Change 60738 on 2002/10/31 by hartogs@fl hartogs
```

Added section for determining the required input data size based on the draw initiator and the grouper programming registers. Added section on general sanity checks for grouper programming in major mode 1. Updated event enumeration to match block file (added several events). Added DI PT 2D TRI STRIP to the prim type enumeration in the VGT DRAW INITIATOR register. ${\tt Added\ VGT_GRP_2D_TRI\ enumeration\ to\ prim\ type\ field\ of\ VGT_GROUP_PRIM_TYPE\ register}$ (and deleted some unused prim type enumerations). Updated Major Mode 0 settings table for 2D compond index changes. Added 2D TRI STRIP entry to this table. Changed address of many of the GFX registers registers to match addresses in the block file. Added VGT_MULTI_PRIM_IB_RESET_INDX register with description. Changed VGT_VTX_TIMEOUT_REG to VGT_ VGT_VTX_VECT_EJECT_REG register Added VGT DMA DATA FIFO DEPTH register Added VGT DMA REQ FIFO DEPTH register Added VGT_DRAW_INIT_FIFO_DEPTH register Added VGT LAST COPY STATE register. Added section called "Draw Initiator Programming" containing two subsections: "Number of Indices" and "Using the Multi-prim Index Buffer Reset Functionality" Change 60701 on 2002/10/31 by georgev@ma georgev Put in documentation for floating point numbers. Change 60669 on 2002/10/31 by gabarca@gabarca_crayola_win_cvd ODD EVEN MD PGSEL is 1 in all modes Change 60634 on 2002/10/31 by mpersaud@mpersaud r400 win tor Rev 1.1 Mahendra PersaudDate: Oct 31, 2002 Added VIP signals to CP Moved and renamed document to ...\doc lib\design\blocks\chip\R400 - DC CP Interface.doc Change 60628 on 2002/10/31 by smoss@smoss crayola win

su tests

Change 60627 on 2002/10/31 by mzhu@mzhu_crayola_win_tor

Add dual display tests in 3.4.9.12

Change 60624 on 2002/10/31 by khabbari@khabbari r400 win

disp signals added to disp/cp inteface doc

Change 60620 on 2002/10/31 by mkelly@fl mkelly r400 win laptop

```
Update screen scissor and window scissor tests for tracking...
Change 60565 on 2002/10/30 by gregs@laptop1
update
Change 60393 on 2002/10/30 by jacarey@fl_jcarey2
Fix Typo in CP PERFMON CNTL register description
Change 60376 on 2002/10/30 by {\tt mpersaud@mpersaud\_r400\_win\_tor}
Updated with Appendix A - MH_DCC Interface
Change 60360 on 2002/10/30 by gregs@laptop1
added IO RBBM genericc y signal
Change 60295 on 2002/10/30 by mzhu@mzhu_crayola_win_tor
Update 3.4.9.4 Color Space Conversion
Add 3.4.9.10 double buffer registers
Add 3.4.9.11 DCP CRC
Change 60294 on 2002/10/30 by rbell@rbell_crayola_win_cvd
updated
Change 60264 on 2002/10/30 by frising@ma_frising
v.1.8
-bring up to date with v.0.99a of R400numerics.doc. Includes adding new instructions,
updating existing instructions, and moving to counter based predicate scheme.
Change 60178 on 2002/10/29 by frising@ma frising
v.0.99a
-Sync up with v.1.8 of shaders.doc that I've been editing and will check-in soon.
Change 60167 on 2002/10/29 by gregs@gregs_r400_win_marlboro
update
Change 60126 on 2002/10/29 by rbell@rbell crayola win cvd
Finished MS3 D2 tests
```

```
Change 60112 on 2002/10/29 by vgoel@fl_vgoel2
added rpatch bug for tessellation 11.5
Change 60078 on 2002/10/29 by jowang@jowang R400 win
added CRC generation
Change 59994 on 2002/10/29 by jacarey@fl jcarey2
Add registers for the CP Performance Counter
Change 59989 on 2002/10/29 by jacarey@fl_jcarey2
RBBM Performance Counters
Change 59944 on 2002/10/29 by csampayo@fl csampayo r400
Added bug# 83
Change 59941 on 2002/10/29 by llefebvr@llefebvre laptop r400
backup and SQ->SP interface change.
Change 59932 on 2002/10/29 by nluu@nluu_r400_doclib_cnnb
- update interface to add start of cycle and op code signals
   - cycle is 1 clock shorter, strobe is asserted 1 clock after data is driven instead
of 2 clocks
   - decodes are don't cares when not in active cycle
   - ready should be high by default
Change 59930 on 2002/10/29 by gregs@gregs r400 win marlboro
added Test Controller connections to IO DFT cells.
Change 59904 on 2002/10/29 by jacarey@fl_jcarey_desktop
Source clipping is only done by the CP for ROPs that include a source term.
Change 59873 on 2002/10/28 by gregs@gregs_r400_win_marlboro
io dft cells inserted - fixes.
Change 59867 on 2002/10/28 by frising@ma frising
v.0.99
```

```
-updated to counter based predicate instructions.
-lots of work on 32-bit rounding issues. Still more to do especially for 16-bit FP and
conversion between formats and things like RF expansions.
Change 59820 on 2002/10/28 by mzhu@mzhu crayola win tor
Add matrix transform constant in 11.18
Change 59816 on 2002/10/28 by rfevreau@rfevreau r400 win
   New goldens
Change 59789 on 2002/10/28 by jacarey@fl jcarey2
AlphaBlend, AAFONT and Load_Execute marked as "Not Currently Supported"
Change 59706 on 2002/10/28 by csampayo@fl_csampayo_r400
Added bug# 82
Change 59693 on 2002/10/28 by jacarey@fl jcarey2
Swap bits for oper=gmcdecode flags
Change 59683 on 2002/10/28 by csampayo@fl csampayo r400
Try again
Change 59682 on 2002/10/28 by csampayo@fl_csampayo_r400
Added Bugzilla report# to bug# 81
Change 59681 on 2002/10/28 by csampayo@fl csampayo r400
Some housekeeping
Change 59677 on 2002/10/28 by jacarey@fl jcarey2
1. ROP7:4 != ROP3:0 flag for oper=gmcdecode
2. Src_Clip_Disable Flag for oper=gmcdecode
Change 59592 on 2002/10/27 by csampayo@fl_csampayo_lt_r400
Updated test list and test tracker status for the following tests:
r400vgt multi pass pix shader 01
r400vgt_multi_pass_pix_shader_02
r400vgt multi pass pix shader 03
```

```
r400vgt_multi_pass_pix_shader_04
r400vgt_multi_pass_pix_shader_05
r400vgt_multi_pass_pix_shader_06
Change 59437 on 2002/10/25 by ashishs@fl_ashishs_r400_win
update
Change 59405 on 2002/10/25 by lseiler@lseiler r400 win marlboro
Added a column for device address
Change 59397 on 2002/10/25 by gregs@gregs_r400_win_marlboro
updated the buscfg strap encodings.
Change 59395 on 2002/10/25 by jacarey@fl_jcarey2
Remove CP CONTEXT ID register it will be in the VGT
Change 59371 on 2002/10/25 by jacarey@fl jcarey2
Update Performance Conections.
Change 59342 on 2002/10/25 by jacarey@fl jcarey desktop
Document CP_CONTEXT_ID register.
Change 59317 on 2002/10/25 by jacarey@fl_jcarey2
Update RBBM Debug Register.
Change 59314 on 2002/10/25 by jacarey@fl jcarey2
Updates to RBBM spec to clarify wait until, nqwait, and Isync wait conditions.
Change 59255 on 2002/10/24 by grayc@grayc r400 win
initial release
Change 59211 on 2002/10/24 by ashishs@fl_ashishs_r400_win
update
Change 59151 on 2002/10/24 by frising@ma frising
v.1.57
- Rework of degamma control to be more in line with hardware schedule :) Perhaps
```

surprisingly, this resulted in a cleaner SW interface and easier HW implementation. This involved:

- Removing of DEGAMMA_CNTL_ALL
- Adding 4 new DATA_FORMATS: FMT_8_8_8_8_8_AS_16_16_16_16, FMT_DXT1_AS_16_16_16_16, FMT DXT2 3 AS 16 16 16 16 and FMT DXT4 5 AS 16 16 16 16.
- Updated DATA_FORMAT table. This is now much cleaner. FOLKS SHOULD STUDY THIS CLOSELY.
- FMT DXN is no longer a degammable format.
- Update DATA_FORMAT note 7.) to say:

"7.) Channels being degamm'd remain unsigned repeating fraction after degamma. Enabling degamma in any channel does not change the format in which the data is stored in the L2 cache. This enables software to make trade-offs between high quality degamma and performance. Specifically, formats FMT_8_8_8_8, FMT_DXT1, FMT_DXT2_3, and FMT_DXT4_5 are stored in the L2 cache as 4x8 while their *_AS_16_16_16_16 counterparts are stored as 4x16."

Change 59115 on 2002/10/24 by jacarey@fl jcarey2

RBBM Spec:

- 1. Add Extern_Trig_Cntl Register and Diagram
- 2. Update text for nqwait and gui_active related items.

Change 59100 on 2002/10/24 by ashishs@fl ashishs r400 win

update

Change 59060 on 2002/10/24 by tshah@fl tshah

included description for CP_PIPE busy for Wait until condition. Hysteresis for $\mathtt{GUI_ACTIVE}$

Change 59054 on 2002/10/24 by mkelly@fl mkelly r400 win laptop

Update screen scissor test name in works..

Change 59053 on 2002/10/24 by $mkelly@fl_mkelly_r400_win_laptop$

SC Clip Rect tests, LINE_LOOP, STIPPLE, FSAA permutations...

Change 58970 on 2002/10/23 by $ashishs@fl_ashishs_r400_win$

Tests guard band clipping 4 primitives in 4 quadrants.

Each primitive has 6 vertices and first vert on vertical guard band. Top Left Quadrant, gouraud shading Top Right Quadrant, FLAT SHADING with START vertex as provoking ${\tt vtx}$ Lower Right Quadrant, FLAT SHADING with END vertex as provoking vtx Lower Left Quadrant, SIX TEXTURES, with COLORO as transparent Method: 6 Vert Strip, first vert on vertical guard band Expected Results: 4 primitives, four quadrants, no clipping, no discarding Change 58948 on 2002/10/23 by rthambim@rthambim_r400_win_tor Initial revision. Change 58906 on 2002/10/23 by mzhu@mzhu_crayola_win_tor Add in Colour Spaces.xls in perforce Change 58841 on 2002/10/23 by frising@ma frising -fix up mapping of YCrCb to GPR in DATA FORMAT table. Now Z(B) = Cb, Y(G) = Y, X(R) = Cr. (Cb are Cr were swapped before) -coorespondingly rename border colors to ACbYCr Black and ACbCrY Black. Note this is just a rename and does not affect actual values since Cr and Cb use the same value. Change 58817 on 2002/10/23 by vgoel@fl_vgoel2 added vertex export bug report resulting from $r400 vgt_hos_PNT_adaptive$ Change 58806 on 2002/10/23 by rbell@rbell_crayola_win_cvd updated Change 58801 on 2002/10/23 by jacarey@fl jcarey2 Add ROP comment to GradFill Packet Change 58743 on 2002/10/22 by frising@ma frising 0.98 -added cube instruction implementation -misc clean-up. Change 58728 on 2002/10/22 by gregs@gregs r400 win marlboro

update

```
Change 58697 on 2002/10/22 by smoss@smoss_crayola_win
su tests
Change 58679 on 2002/10/22 by gregs@gregs_r400_win_marlboro
fixed Generic pads
Change 58630 on 2002/10/22 by rbell@rbell crayola win cvd
Completed some more D2 tests
Change 58617 on 2002/10/22 by jacarey@fl_jcarey2
Update for Clearing the Register Update Flag
Change 58615 on 2002/10/22 by jacarey@fl_jcarey2
Document Updates for Incremental Register Updates
Change 58606 on 2002/10/22 by gregs@gregs r400 win marlboro
<added CONFIG XSTRAP3 register and number of straps >
Change 58603 on 2002/10/22 by kmahler@kmahler r400 doc lib
Added More details and added Proposal for new PM4 Library and Real-Time support.
Change 58563 on 2002/10/22 by llefebvr@llefebvre_laptop_r400
Defined the memory exports better.
Change 58562 on 2002/10/22 by llefebvr@llefebvre laptop r400
Updated the SX interfaces.
Change 58525 on 2002/10/22 by jowang@jowang R400 win
Modified M3 Test Plan after the review
Change 58522 on 2002/10/22 by georgev@ma_georgev
Updated to reflect changes and new stuff.
Change 58425 on 2002/10/21 by khabbari@khabbari r400 win
added frame rate conv test list
```

Change 58419 on 2002/10/21 by frising@ma frising -initial check-in. Change 58369 on 2002/10/21 by frising@ma frising v.1.55 - Added DEGAMMA_CNTL_ALL field to texture constant to indicate if degammed textures should be stored as 8-bit or 16-bit in TC. Noted that this field is not currently supported. Also noted what the default conversion are in lieu of this support along with bringing all the degamma documentation inline with the current degamma plans. - Added REQUEST_SIZE field to texture and vertex constant to indicate if read requests should be 256 or 512 bit. - Defined R400 TP NAN to be 0x7FE00000 (used for out of range vertex fetches) - $*16_EXPAND$ is converted to 16.16 signed fixed point now. - *MPEG is clamped to [-256..255] pre filter (was [-255..255]) Change 58350 on 2002/10/21 by rfevreau@rfevreau r400 win New goldens with PClk set to 165MHz Test list update Change 58329 on 2002/10/21 by mzhu@mzhu_crayola_win_tor Update DxGRPH_PITCH and DxOVL_PITCH Change 58321 on 2002/10/21 by jowang@jowang R400 win added M3 comments Change 58318 on 2002/10/21 by mzhu@mzhu crayola win tor Update interface signals, DCP DMIF grph1 pitch, DCP DMIF grph2 pitch, DCP_DMIF_ovl1_pitch and DCP_DMIF_ovl2_pitch. Change 58308 on 2002/10/21 by paulv@MA PVELLA Updated MHS portion of spec with latest and greatest features, info, etc. Change 58307 on 2002/10/21 by csampayo@fl csampayo lt r400

Cleaned up tests, added 1 new VGT test to test list and updated the test tracker

```
accordingly
Change 58257 on 2002/10/21 by khabbari@khabbari_r400_win
added frame rate conv
Change 58254 on 2002/10/21 by mzhu@mzhu crayola win tor
Update 11.1.2 and 11.1.3 for D1GRPH and D2GRPH double buffer register
Add 11.20 for DCP CRC
Change 58253 on 2002/10/21 by mzhu@mzhu_crayola_win_tor
Add 8-bit 2101010 mode tests in 3.4.9.9
Change 58251 on 2002/10/21 by mzhu@mzhu crayola win tor
Update DxGRPH double buffer register
Add DCP CRC register
Change 58213 on 2002/10/20 by gregs@laptop1
update
Change 58161 on 2002/10/19 by gregs@laptop1
initial device id numbers
Change 58120 on 2002/10/18 by csampayo@fl_csampayo_r400
Added bug# 88
Change 58095 on 2002/10/18 by vgoel@fl vgoel2
updated for new bug
Change 58080 on 2002/10/18 by gregs@gregs r400 win marlboro
update
Change 58073 on 2002/10/18 by gregs@gregs_r400_win_marlboro
device_id update
Change 58032 on 2002/10/18 by jacarey@fl jcarey2
Update diagram for clock gating
```

```
Change 58003 on 2002/10/18 by jasif@jasif\_r400\_win tor
Updated test names and status.
Change 57994 on 2002/10/18 by ashishs@fl ashishs r400 win
updated a comment
Change 57991 on 2002/10/18 by jacarey@fl jcarey2
Update documents for Incremental Register Update
Change 57976 on 2002/10/18 by ashishs@fl_ashishs_r400_win
Highlighted the bug "r400cl_bary_texture_08.cpp"
Change 57941 on 2002/10/18 by bbloemer@ma_bbloemer
Updated .doc file.
Change 57939 on 2002/10/18 by ashishs@fl ashishs r400 win
updated test list and Tracker for the corresponding change in file name viz
r400cl_gabnd_04 to r400cl_gband_06
Change 57935 on 2002/10/18 by ashishs@fl_ashishs_r400_win
Deleted test r400cl gband 04 and renamed it to r400cl gband 06. Also updated the
Validation_Approach_plan.doc since it had some errors with tests name and numberings.
Change 57933 on 2002/10/18 by jacarey@fl_jcarey2
1. Remove legacy versions of packets that were struck through
2. Add Incremental Register Write Support
Change 57890 on 2002/10/18 by jacarey@fl jcarey2
Added src_data_format to the alphablend packet.
Change 57866 on 2002/10/17 by grayc@grayc_r400_win
for safekeeping ... expanded on test description
Change 57848 on 2002/10/17 by csampayo@fl_csampayo_r400
Added bug# 78
Change 57834 on 2002/10/17 by gregs@gregs r400 win marlboro
```

```
added R300 power
Change 57824 on 2002/10/17 by gregs@gregs_r400_win_marlboro
scaled from R300 part - ready.
Change 57784 on 2002/10/17 by jacarey@fl_jcarey2
Refer to the PA register spec for the format of the destination clipping parameters in
the PM4 spec.
Change 57667 on 2002/10/17 by gregs@gregs_r400_win_marlboro
update
Change 57661 on 2002/10/17 by gregs@gregs\_r400\_win\_marlboro
added to the discription of ROM_CLK register
Change 57576 on 2002/10/16 by gregs@laptop1
work in progress
Change 57574 on 2002/10/16 by gregs@laptop1
work in progress
Change 57527 on 2002/10/16 by llefebvr@llefebvre_laptop_r400
Clarifications and minor updates. Version 2.08.
Change 57510 on 2002/10/16 by csampayo@fl csampayo r400
Added 1 new HOS with index reset test, updated test_list and test tracker
Change 57494 on 2002/10/16 by smoss@smoss crayola win
update
Change 57475 on 2002/10/16 by ashishs@fl_ashishs_r400_win
updated
Change 57471 on 2002/10/16 by rbell@rbell crayola win cvd
Completed host arbitration tests.
```

```
Change 57470 on 2002/10/16 by jacarey@fl_jcarey2
Documentation Updates for Programming Max Count while processing.
Change 57459 on 2002/10/16 by mkelly@fl mkelly r400 win laptop
Add r400sc parameterized line list 01 to tracker...
Change 57435 on 2002/10/16 by ashishs@fl ashishs r400 win
update
Change 57394 on 2002/10/16 by mzhu@mzhu_crayola_win_tor
Add 8-bit 2101010 graphics format
Add PIX TYPE for selecting color space conversion parameters
Change 57382 on 2002/10/16 by jacarey@fl jcarey2
Update to transfifo clock
Change 57363 on 2002/10/16 by efong@efong r400 win tor doc
Coverage Metrics Proposal and users guide
Change 57337 on 2002/10/16 by jacarey@fl_jcarey2
Update for sclk reg
Change 57253 on 2002/10/15 by csampayo@fl_csampayo_r400
VGT housekeeping
Change 57252 on 2002/10/15 by csampayo@fl csampayo r400
Added bug# 77
Change 57247 on 2002/10/15 by csampayo@fl_csampayo_r400
Added 5 new VGT index reset tests and updated test_list and test tracker
Change 57202 on 2002/10/15 by csampayo@fl_csampayo_r400
Updated test_list and test tracker for the following VGT tests:
r400vgt_vtx_export_very_very_simple_01
r400vgt vtx export very very simple 02
r400vgt_vtx_export_very_very_simple_03
```

```
Change 57196 on 2002/10/15 by jacarey@fl jcarey2
Update for SCLK_REG
Change 57184 on 2002/10/15 by mkelly@fl mkelly r400 win laptop
Update...
Change 57177 on 2002/10/15 by beiwang@bei depot
Updated the MCCI block diagram with the latest AGP path
Change 57175 on 2002/10/15 by jacarey@fl_jcarey2
1. Add CP_PERFMON_CNTL to CP register set
2. Documentation Updates for Clock Gating
Change 57165 on 2002/10/15 by jowang@jowang R400 win
updated test plan with M3 features for 20bpp and CRC \,
Change 57157 on 2002/10/15 by smorein@smorein r400
updated with register names
Change 57146 on 2002/10/15 by kmahler@kmahler_r400_doc_lib
Added some minor details, but not sure what?
Change 57086 on 2002/10/15 by jhoule@MA_JHOULE
1.54:
Added MIP PACKING bit allowing to disable packing of the mip tail.
Change 57052 on 2002/10/15 by jacarey@fl jcarey2
Clarify the number of DWORDs for ALU and Texture constant updates.
Change 56993 on 2002/10/14 by csampayo@fl csampayo r400
Closed bugs# 63,71,74. Added bug# 76
Change 56977 on 2002/10/14 by ashishs@fl_ashishs_r400_win
update
```

Change 56944 on 2002/10/14 by jacarey@fl_jcarey2

```
Update Diagram for Dynamic Clocking in the CP
Change 56936 on 2002/10/14 by csampayo@fl_csampayo_r400
Added 3 new VGT tests, updated test list and test tracker
Change 56928 on 2002/10/14 by mkelly@fl mkelly r400 win laptop
update...
Change 56918 on 2002/10/14 by csampayo@fl_csampayo_lt_r400
Some VGT housekeeping
Change 56881 on 2002/10/14 by llefebvr@llefebvre_laptop_r400
Loops, jumps and calls are now using a 13 bit address which allows to jump and call and
loop around any control flow addresses (does not requires to be even anymore).
Change 56872 on 2002/10/14 by lseiler@lseiler_r400_win_marlboro
Updated Zplane format to include MultiSample bit
Change 56865 on 2002/10/14 by vgoel@fl vgoel2
added frame buffer dump mismatch issue for tiled on and off mode.
Change 56855 on 2002/10/14 by smoss@smoss crayola win
su tests
Change 56838 on 2002/10/14 by kcorrell@kcorrell r400 docs marlboro nb
update of MH document up to chapter 13
Change 56659 on 2002/10/11 by jayw@MA JAYW
old needs updating
Change 56612 on 2002/10/11 by jacarey@fl_jcarey2
Update for DP SRC SOURCE
Change 56604 on 2002/10/11 by llefebvr@llefebvre_laptop_r400
Revision 2.06 of the spec.
Change 56601 on 2002/10/11 by rbell@rbell crayola win cvd
```

```
Completed b&w offset floating point tests
Change 56593 on 2002/10/11 by jacarey@fl_jcarey2
Make SQ CP ^{\star} eventid buses 5 bits to cover all defined events.
Change 56586 on 2002/10/11 by dwong@cndwong2
changed the real-time signal names wired into CP (from overlay)
bits 5 and 6 of connections to the CP_rts_discretes input bus are changed to
DISPx CP flip proceed
Change 56581 on 2002/10/11 by tshah@fl_tshah
description of RBBM_DEBUG register write - snoop in RBBM's BIF_PIPE
Change 56579 on 2002/10/11 by kmahler@kmahler_r400 doc_lib
Some updates to support Random Shader Generator.
Change 56574 on 2002/10/11 by kmahler@kmahler r400 doc lib
Some more updates; This document is now mostly ready for the initial review to allow
the first phase of development to begin.
Change 56558 on 2002/10/11 by jacarey@fl_jcarey2
B4 and B9 Booleans need to be set for NextChar
Change 56544 on 2002/10/11 by jhoule@MA JHOULE
0.9.15:
Various updates in descriptions.
Updated TP_TC interface to 9 bits of pitch everywhere.
Change 56495 on 2002/10/10 by csampayo@fl_csampayo_r400
Added bug# 74
Change 56475 on 2002/10/10 by mzhu@mzhu_crayola_win_tor
Fix LUT fill for Floating point 16161616 mode - (0x0000 - 0x3BFF)
Change 56461 on 2002/10/10 by nbarbier@nbarbier r400 win tor
Added CRTC1 & CRTC2 enable and freeze signals.
```

```
Added CRTC1 & CRTC2 interrupts.
Change 56403 on 2002/10/10 by jasif@jasif_r400_win_tor
Updated test names and status.
Change 56398 on 2002/10/10 by grayc@grayc r400 win
updates
Change 56386 on 2002/10/10 by rherrick@ma_rherrick_crayola
Implement Mult-sample stimulus application by TC client...
Change 56354 on 2002/10/10 by gregs@gregs_r400_win_marlboro
added block_busy_extender
Change 56350 on 2002/10/10 by jacarey@fl_jcarey2
Update pseudocode for LCC packet as processed by Real-time
Change 56318 on 2002/10/10 by rfevreau@rfevreau r400 win
  Added a sleep to the job file and added new DVO testlist
Change 56314 on 2002/10/10 by jacarey@fl_jcarey2
Clarification on ME_INIT for Mask Bit 9
Change 56313 on 2002/10/10 by csampayo@fl_csampayo_r400
Adeed bug# 73
Change 56303 on 2002/10/10 by jacarey@fl jcarey2
Added Default Reset Control to ME init packet (bit 9 of mask)
Change 56213 on 2002/10/09 by gregs@laptop1
update
Change 56212 on 2002/10/09 by csampayo@fl_csampayo_r400
Some VGT housekeeping
Change 56171 on 2002/10/09 by csampayo@fl_csampayo_r400
```

```
1. Updated tests r400vgt_index_min_max_01 and _02 for multi-context
```

- 2. Added new VGT tests r400vgt_index_min_max_03 and _04
- 3. Updated test_list and the test tracker

Change 56126 on 2002/10/09 by mpersaud@mpersaud r400 win tor

Bumped document revision

Change 56123 on 2002/10/09 by mpersaud@mpersaud r400 win tor

Added TV_DOUT_interlace_en and TV_DOUT_tvout_en to interface.

Change 56082 on 2002/10/09 by jacarey@fl jcarey2

Added VIP_CP_eof_ack to list.

Change 56051 on 2002/10/09 by gregs@laptop1

pin strap buscfg is 2 bits widw now (was 3 bits)

Change 56048 on 2002/10/09 by jacarey@fl jcarey2

Invert polarity of the MH CP writeclean signal

Change 56033 on 2002/10/09 by mkelly@fl_mkelly_r400_win_laptop

Packed color example usage for VFD

Change 56008 on 2002/10/09 by mkelly@fl_mkelly_r400_win_laptop

- * Rasterize 256 triangles, 1 packet. Each triangle should hit 4 quads.

 The test moves the triangle 2 quads at a time in X and
 2 quads in increasing Y.
- * Update test_list
- * Update test documentation in test tracker

Change 55960 on 2002/10/08 by nbarbier@nbarbier r400 win tor

Added description of 2nd DVO CRC.

Added description of TMDS data synchronizer.

Change 55950 on 2002/10/08 by gregs@gregs_r400_win_marlboro

< DEVICE_ID - work in progress >

Change 55945 on 2002/10/08 by ashishs@fl ashishs r400 win

update

```
Change 55935 on 2002/10/08 by jacarey@fl_jcarey2
Update description of the BO 2D Boolean for monochrome sources.
Change 55922 on 2002/10/08 by jacarey@fl jcarey2
Only Set BO Boolean for solid brushes if SRC_TYPE != Mono
Change 55904 on 2002/10/08 by bryans@bryans crayola doc
Update schedule to minimize Linux usage after midnight
Change 55891 on 2002/10/08 by rherrick@ma_rherrick_crayola
Removing FETCH SHADOW from queuemgr/checker... Implementing setting of SCLK period in
parser... Changing IDLE to work on SCLK instead of MCLK... Beginning implementation
Fetch Multisample in checker (wanted to regress and check this change in before heading
forward from this point)...
Change 55869 on 2002/10/08 by smoss@smoss crayola win
su tests
Change 55848 on 2002/10/08 by mpersaud@mpersaud r400 win tor
Update port names to match verilog implementation
Change 55816 on 2002/10/08 by jacarey@fl_jcarey2
Update spec for dst clip parameters to be positive only.
Change 55795 on 2002/10/08 by smoss@smoss crayola win
su tests
Change 55763 on 2002/10/08 by grayc@grayc r400 win
initial release
Change 55758 on 2002/10/08 by mkelly@fl_mkelly_r400_win_laptop
Add Clay's multi-chip tests to SC special cases documentation
Change 55731 on 2002/10/07 by csampayo@fl csampayo r400
```

Added bug# 72

```
Change 55727 on 2002/10/07 by csampayo@fl_csampayo_r400
Added VGT index size test and updated test_list and test tracker
Change 55696 on 2002/10/07 by gregs@gregs r400 win marlboro
AGP bug "AD 20 stitch" - fixed
Change 55679 on 2002/10/07 by jacarey@fl jcarey2
Added write confirm function for DMA engine at end of table.
Change 55669 on 2002/10/07 by rbell@rbell_crayola_win_cvd
Completed half res tests
Change 55570 on 2002/10/07 by csampayo@fl_csampayo_lt_r400
Added bug# 71
Change 55555 on 2002/10/07 by chwang@chwang doc r400 win cvd
Update.
Change 55544 on 2002/10/07 by imuskatb@imuskatb r400 win cnimuskatb
   updated
Change 55527 on 2002/10/07 by smoss@smoss\_crayola\_win
SU tests
Change 55513 on 2002/10/06 by ashishs@fl_ashishs_r400_win
update
Change 55506 on 2002/10/06 by lkang@lkang r400 win tor
updates
Change 55494 on 2002/10/05 by gregs@laptop1
update - tests passed.
Change 55440 on 2002/10/04 by gregs@gregs_r400_win_marlboro
update
```

```
Change 55399 on 2002/10/04 by jacarey@fl jcarey2
Miscellaneous Updates for New 2D Packets
Change 55398 on 2002/10/04 by jacarey@fl jcarey2
1. Removed Width from compound indices
2. Added 2D_Tri_Strip compound indice
3. Misc. Comments.
Change 55342 on 2002/10/04 by gregs@gregs_r400_win_marlboro
update
Change 55332 on 2002/10/04 by llefebvr@llefebvr_r400
Small update regarding allocs.
Change 55327 on 2002/10/04 by alleng@alleng r400 win marlboro
Additional information regarding the color and depth cache tests...
Change 55302 on 2002/10/04 by jimmylau@jimmylau r400 win tor
Updates SCL-CRTC interface specs based on interface review on Sept 25, 02
Change 55285 on 2002/10/04 by mkelly@fl_mkelly_r400_win_laptop
Enter new SC perf test
Change 55209 on 2002/10/03 by csampayo@fl_csampayo_r400
Added bug# 70
Change 55208 on 2002/10/03 by gregs@laptop1
added issues/notes related to pad ring.
Change 55199 on 2002/10/03 by csampayo@fl csampayo r400
Added 4 new DMA swap tests and updated test_list and the test tracker
Change 55179 on 2002/10/03 by gregs@laptop1
added DVO power pads + added ESD pads (not distributed yet) + equlized sides to
approximately the same size + clean-up
```

Change 55164 on 2002/10/03 by mzhu@mzhu crayola win tor

```
Modify the 3rd milestone tests
Change 55163 on 2002/10/03 by jacarey@fl_jcarey2
Updates to Gradfill packet
Update to comment on setting the 2D B3 Boolean
Change 55162 on 2002/10/03 by jacarey@fl jcarey2
Boolean B3 should be '0' for SRC_TYPE=0.
Mark Earl will check-in the emulator update.
Change 55136 on 2002/10/03 by mpersaud@mpersaud_r400_win_tor
Updated interface as per interface spec review on September 27.
Change 55094 on 2002/10/03 by kmahler@kmahler r400 doc lib
Another intermediate revision.... getting closer :)
Change 55083 on 2002/10/03 by smorein@smorein r400
initial version of performance counter spec, block leads and arch need to view and edit
Change 55036 on 2002/10/03 by csampayo@fl_csampayo_r400
VGT housekeeping
Change 54988 on 2002/10/03 by rbell@rbell_crayola_win_cvd
Completed digital output tests and teapot test.
Change 54971 on 2002/10/03 by jacarey@fl jcarey2
Minor updates to register default values and minimal power-up sequence.
Change 54899 on 2002/10/02 by gregs@gregs_r400_win_marlboro
open issues update
Change 54893 on 2002/10/02 by gregs@gregs_r400_win_marlboro
Fixed the PadLIst name :)
Change 54882 on 2002/10/02 by gregs@gregs r400 win marlboro
DEF generator pages cleaned-up.
```

```
Change 54810 on 2002/10/02 by csampayo@fl_csampayo_r400
Forgot to save previous updates
Change 54802 on 2002/10/02 by csampayo@fl csampayo r400
{\tt Added \ 3 \ new \ VGT \ tests \ with \ negative \ index \ offsets \ and \ updated \ test\_list \ and \ the \ test}
tracker
Change 54725 on 2002/10/02 by kmahler@kmahler_r400_doc_lib
Another intermediate revision of the initial spec.
Change 54701 on 2002/10/01 by gregs@gregs_r400_win_marlboro
update (Tuesday)
Change 54679 on 2002/10/01 by tshah@fl tshah
vgt skew count changes in decoument and code -- threshold must be a non-zero even
number
Change 54634 on 2002/10/01 by smoss@smoss crayola win
SU tests
Change 54610 on 2002/10/01 by mzhu@mzhu crayola win tor
Add LUT and frame buffer fill pattern for digital output
Change 54584 on 2002/10/01 by mkelly@fl mkelly r400 win laptop
Update more stipple test documentation....
Change 54567 on 2002/10/01 by gregs@gregs_r400\_win\_marlboro
added mux for core_volt_cntl[1:0] pins
Change 54550 on 2002/10/01 by jacarey@fl_jcarey2
Partial updates for new 2D packets
Change 54523 on 2002/10/01 by mkelly@fl_mkelly_r400_win_laptop
Update new window offset tests.
Change 54518 on 2002/10/01 by mpersaud@mpersaud r400 win tor
```

```
Added to CRTC_TV.doc
Change 54490 on 2002/10/01 by jacarey@fl_jcarey_desktop
Miscellaneous clarifications to the RT event engine diagram.
Change 54476 on 2002/09/30 by kmahler@kmahler_r400_doc_lib
More updates to the initial design doc.
Change 54464 on 2002/09/30 by gregs@gregs_r400_win_marlboro
added DEBUG bus connections
Change 54447 on 2002/09/30 by gregs@gregs r400 win marlboro
closed ring with corners.
Change 54416 on 2002/09/30 by mdoggett@MA\_MDOGGETT\_LT
Added FetchMultiSample.
Change 54370 on 2002/09/30 by jacarey@fl_jcarey2
Added compound index details for Stretch Blit Support.
Change 54347 on 2002/09/30 by jacarey@fl jcarey2
Add register to the poll_valid signal to align with data.
Change 54321 on 2002/09/30 by imuskatb@imuskatb r400 win cnimuskatb
updated
Change 54301 on 2002/09/30 by chwang@chwang_doc_r400_win_cvd
Update.
Change 54279 on 2002/09/30 by vgoel@fl_vgoel2
added bugzilla number 435
Change 54269 on 2002/09/30 by jcox@jcox_r400
fix size of chart
```

Change 54264 on 2002/09/30 by jcox@jcox r400

```
Fix macro for dating chart
Change 54263 on 2002/09/30 by jcox@jcox_r400
Fix miscellaneous issues with Emulation regression summary and detail charts
Change 54261 on 2002/09/30 by mkelly@fl_mkelly_r400_win_laptop
Update usage of regress r400
Change 54252 on 2002/09/29 by csampayo@fl_csampayo_lt_r400
Updated status for the VGT tests:
r400vgt_index_offset_04
r400vgt_index_offset_05
Change 54248 on 2002/09/29 by gregs@laptop1
Sunday update
Change 54184 on 2002/09/27 by rfevreau@rfevreau r400 win
  Added new job file and rg files for VIP full chip run
   DVO Testlist update
Change 54165 on 2002/09/27 by jcox@jcox_r400
Add Emulator test plans to web
Change 54162 on 2002/09/27 by gregs@laptop1
Friday update
Change 54124 on 2002/09/27 by jcox@web sync
Changes to publish charts to web (add close workbook macro)
Change 54120 on 2002/09/27 by gabarca@gabarca crayola win cvd
updated, still not with the meeting conclussions
Change 54118 on 2002/09/27 by jcox@fl_jcox2_web
Add macros to output charts to web
Change 54069 on 2002/09/27 by csampayo@fl_csampayo_r400
```

```
Updated bug# 67
Change 54055 on 2002/09/27 by dougd@doug
Updated area of sq block based on netlist submitted 9/27/02
Change 54049 on 2002/09/27 by csampayo@fl csampayo r400
Some housekeeping...
Change 54045 on 2002/09/27 by kevino@kevino_r400_win_marlboro
latest
Change 54028 on 2002/09/27 by jacarey@fl_jcarey2
Clean Up Spec per actual connections.
Change 53988 on 2002/09/26 by gregs@gregs_r400_win_marlboro
update
Change 53953 on 2002/09/26 by smoss@smoss crayola win
SU tests
Change 53900 on 2002/09/26 by jacarey@fl_jcarey_desktop
{\tt Make} 2D Default registers write only. Readable via the {\tt ME\_STATMUX}
Change 53857 on 2002/09/26 by jacarey@fl_jcarey_desktop
Update Event_Write packet to include all events
Change 53850 on 2002/09/26 by nbarbier@nbarbier_r400_win_tor
Updated interface document after review meeting.
Change 53842 on 2002/09/26 by rfevreau@rfevreau r400 win
Docs updates
Change 53804 on 2002/09/26 by rbell@rbell_crayola_win_cvd
updated
```

Change 53802 on 2002/09/26 by vgoel@fl_vgoel2

```
updated for closed bugs
Change 53795 on 2002/09/26 by prunstad@prunstad_r400_win_marl
Updated mh area.
Change 53760 on 2002/09/26 by mkelly@fl mkelly r400 win laptop
Close out two bugs
Change 53709 on 2002/09/25 by imuskatb@imuskatb_r400_win_cnimuskatb
   1st draft of sample counter test
Change 53699 on 2002/09/25 by gregs@gregs\_r400\_win\_marlboro
update
Change 53678 on 2002/09/25 by csampayo@fl_csampayo_r400
Closed bug# 66.
Change 53638 on 2002/09/25 by tien@ma spinach
updated TP and TC areas
Change 53622 on 2002/09/25 by smoss@smoss_crayola_win
update
Change 53614 on 2002/09/25 by jasif@jasif_r400_win_tor
Updated regression test names.
Change 53607 on 2002/09/25 by mkelly@fl_mkelly_r400_win_laptop
Poly offset / scale tests
Change 53556 on 2002/09/25 by jacarey@fl_jcarey_desktop
Update CP's Buffer Sizes to a 2^20 DWORD limit.
Change 53534 on 2002/09/25 by csampayo@fl_csampayo_r400
Added Bugzilla report# to bug# 67
Change 53531 on 2002/09/25 by tshah@fl_tshah
```

```
Logic for Field Affecting Operation (FAO)
Change 53503 on 2002/09/25 by mkelly@fl_mkelly_r400_win_laptop
Log potential bug
Change 53502 on 2002/09/25 by mkelly@fl mkelly r400 win laptop
Log potential bug
Change 53499 on 2002/09/25 by mkelly@fl_mkelly_r400_win_laptop
Poly Offset combinations...
Change 53496 on 2002/09/25 by mkelly@fl_mkelly_r400_win_laptop
Document r400sc_poly_offset_03 test
Change 53477 on 2002/09/24 by gregs@gregs r400 win marlboro
update
Change 53472 on 2002/09/24 by gregs@gregs r400 win marlboro
update
Change 53466 on 2002/09/24 by csampayo@fl_csampayo_r400
Try again
Change 53464 on 2002/09/24 by csampayo@fl_csampayo_r400
Added bug#67
Change 53454 on 2002/09/24 by efong@efong_r400_win_tor_doc
Initial Leda Proposal
Change 53451 on 2002/09/24 by csampayo@fl csampayo r400
Added new VGT test. Updated test_list and test tracker
Change 53423 on 2002/09/24 by csampayo@fl_csampayo_r400
Closed bug# 61 and added bug# 66
Change 53396 on 2002/09/24 by gregs@gregs_r400_win_marlboro
```

```
package.xls is now the official r400 spreadsheet.
Change 53395 on 2002/09/24 by gregs@gregs_r400_win_marlboro
< NEW - using rv350 pads now >
Change 53382 on 2002/09/24 by imuskatb@imuskatb r400 win cnimuskatb
   first pass for M3 test
Change 53372 on 2002/09/24 by imuskatb@imuskatb_r400_win_cnimuskatb
   updated test lib
Change 53368 on 2002/09/24 by khabbari@khabbari_r400_win
test plan for 1b released
Change 53367 on 2002/09/24 by mkelly@fl mkelly r400 win laptop
Log bug, rectangle list broken when CL clipping enabled and clipped
Change 53361 on 2002/09/24 by georgev@ma georgev
Added PV to master document.
Change 53359 on 2002/09/24 by alleng@alleng_r400_win_marlboro
Initial checkin of Performance Verification test plan...
Change 53356 on 2002/09/24 by khabbari@khabbari_r400_win
added HTOTAL BY 8 to the interface
Change 53347 on 2002/09/24 by frivas@FL FRivas
Update to HOS test description.
Change 53280 on 2002/09/24 by jacarey@fl jcarey desktop
Add Fix2Flt_Reg PM4 Packet for Video Folks.
  PM4 Spec Update for Packet
  Add Opcode to pm4_it_opcodes
New Unit Test Included
Change 53266 on 2002/09/24 by efong@efong r400 win tor doc
The Excel spreadsheet version of the R400 Regression milestones.doc
```

```
Change 53242 on 2002/09/24 by gabarca@gabarca_crayola_win_cvd
added blink_sequence1 test
Change 53200 on 2002/09/23 by csampayo@fl csampayo r400
Added new VGT index reset test. Updated test_list and test tracker
Change 53167 on 2002/09/23 by jacarey@fl jcarey desktop
1. Comment Only Correction to the Microcode
2. Update Brush X and Brush Y pointers in PM4 spec to be of the range 0.0 to 7.0
Change 53165 on 2002/09/23 by frising@ma_frising
v.1.53
Updates to FetchMultiSample:
-Added Point Filter to MSAA FILTER FUNCTION. This will be used to return a specific
sample.
-OFFSET Z will be used to specify which sample to return.
-For fetchmultisample constant, renamed OUT fileds to RESULT and COLORO fields to MSAA.
Also swapped their locations. This may be slightly unexpected for SW but makes
{\tt RESULT\_FORMAT~align~with~DATA\_FORMAT~which~is~more~consistent~for~TC/TP.}~{\tt Note~these}
fields may go under an additional name change once the new MSAA registers had been
named...all in the name of consistency.
Change 53162 on 2002/09/23 by jacarey@fl jcarey desktop
Clarifications to LCC and Set Constant Packet
Change 53111 on 2002/09/23 by tshah@fl tshah
Only CPQ DATA SWAP bit controls the CP PUSH * data swap
Change 53072 on 2002/09/23 by efong@efong r400 win tor doc
Updated
Change 53056 on 2002/09/23 by jacarey@fl_jcarey_desktop
Documented ROP3's that are supported in R400 for 2D.
Change 53020 on 2002/09/23 by imuskatb@imuskatb_r400_win_cnimuskatb
   updated
```

Change 53019 on 2002/09/23 by mkelly@fl mkelly r400 win laptop

Poly Offset, 8 MSAA, HOS Change 53007 on 2002/09/23 by jacarey@fl_jcarey_desktop Update for oper=clrrepack function for Dst_Type==2 2. Update sizes for physical memories. Change 52992 on 2002/09/23 by mpersaud@mpersaud r400 win tor Rev 0.7 Mahendra Persaud Added TV_CRTC_framestart_freq[1:0] port. Change 52951 on 2002/09/22 by rthambim@rthambim_r400_win_tor Expanded the address width from MH to BIF. Change 52950 on 2002/09/22 by rthambim@rthambim r400 win tor Added status signals. Change 52949 on 2002/09/22 by rthambim@rthambim r400 win tor Included Multi-Function changes. Change 52866 on 2002/09/20 by csampayo@fl_csampayo_r400 Added 2 new VGT tests and updated test list and the test tracker accordingly Change 52854 on 2002/09/20 by mzhu@mzhu_crayola_win_tor Add test plan for 3rd Milestone features Change 52843 on 2002/09/20 by gregs@gregs r400 win marlboro Friday's update Change 52804 on 2002/09/20 by mkelly@fl_mkelly_r400_win_laptop Log potential texture / baryc bug Change 52794 on 2002/09/20 by mkelly@fl_mkelly_r400_win_laptop Review and update SC test validation tracking... Change 52756 on 2002/09/20 by csampayo@fl csampayo lt r400

Added bug# 63

```
Change 52730 on 2002/09/20 by rherrick@ma_rherrick_crayola
Implementing SWAP mode in parser through to client interface... Change all tests to
include SWAP NONE required field...
Also implementing parts of RANDOM mode on address transactions...
Change 52722 on 2002/09/20 by rbell@rbell crayola win cvd
Updated
Change 52648 on 2002/09/19 by csampayo@fl csampayo r400
Added 1 new VGT event handling test and updated the test_list and test tracker
accordingly
Change 52615 on 2002/09/19 by mzhu@mzhu crayola win tor
Update test plan for third milestone
Change 52610 on 2002/09/19 by csampayo@fl csampayo lt r400
Some VGT housekeeping
Change 52551 on 2002/09/19 by rramsey@RRAMSEY P4 r400 win
Clean up RTS data in the SC
Change \operatorname{sc\_walker} so that \operatorname{hw\_scissor} is passed down instead of recalculated in the
Remove registry check for covered edge bias fix, it's always on now
Add covered edge bias fix to RTL (sc pipe)
Clean up some compile warnings in the qpp
Add some documentation on line stipple
Change 52531 on 2002/09/19 by gabarca@gabarca crayola win cvd
updated
Change 52506 on 2002/09/19 by mkelly@fl_mkelly_r400_win_laptop
Cycle SC_SAMPLE_CNTL permutations with all primtypes
Cycle MSAA, 192 packets
Change 52487 on 2002/09/19 by imuskatb@imuskatb r400 win cnimuskatb
   updated test list
```

Change 52482 on 2002/09/19 by mkelly@fl_mkelly_r400_win_laptop Primitive should be gouraud shaded, it is flat shaded. Related to PARAM_GEN = true, CENTERS_ONLY, and SAMPLE_CENTER If PARAM GEN = false, gourand shading works as expected. Change 52475 on 2002/09/19 by gregs@gregs r400 win marlboro added deafult values for rom pads reg Change 52449 on 2002/09/19 by kmahler@kmahler_r400_doc_lib Added Primlib documents to doc lib. Change 52431 on 2002/09/18 by gregs@gregs_r400_win_marlboro It passes read_write test. Change 52430 on 2002/09/18 by gregs@gregs r400 win marlboro added note about auto-increment of index register Change 52429 on 2002/09/18 by csampayo@fl csampayo r400 Added 5 new VGT prim tests and updated test list and test tracker accordingly Change 52426 on 2002/09/18 by gregs@gregs_r400_win_marlboro added ROM pads control register Change 52411 on 2002/09/18 by bryans@bryans_crayola_doc Update for 09/16 Change 52401 on 2002/09/18 by imuskatb@imuskatb r400 win cnimuskatb updated test list and dates Change 52388 on 2002/09/18 by gregs@gregs r400 win marlboro fixed couple of bit fields XSTRAP2 register Change 52382 on 2002/09/18 by mdoggett@MA_MDOGGETT_LT Added DXN Change 52363 on 2002/09/18 by mzhu@mzhu_crayola_win_tor

```
Add more description in 11.1.2 and 11.1.3 for double buffer in horizontal retrace
Change 52342 on 2002/09/18 by mkelly@fl_mkelly_r400_win_laptop
close bug
Change 52334 on 2002/09/18 by mpersaud@mpersaud r400 win tor
Added vsync and hsync going to dac capture model
Change 52324 on 2002/09/18 by jacarey@fl_jcarey_desktop
Intrinsic function for unpacking colors to 8888 format
Change 52300 on 2002/09/18 by mkelly@fl_mkelly_r400_win_laptop
Cycle primitive types through all MSAA and JSS modes.
Change 52295 on 2002/09/18 by nbarbier@nbarbier r400 win tor
Added DOUT I2C tests for M3.
Change 52294 on 2002/09/18 by jhoule@MA JHOULE
Adding it for Tien (he had problems)
Change 52268 on 2002/09/18 by csampayo@fl_csampayo_r400
Added bug# 61
Change 52265 on 2002/09/18 by jacarey@fl_jcarey_desktop
Update for Alpha Color Defaults for RGB565 brush color format.
Change 52257 on 2002/09/18 by rbell@rbell crayola win cvd
updated
Change 52230 on 2002/09/18 by jacarey@fl jcarey desktop
Update to SRC terms for small_text and hostdata_blt* packets (i.e. 32-bit SRC_OFFSET)
Updated the fixed constants that are in the C7 vertex shader constant.
Change 52229 on 2002/09/18 by jacarey@fl_jcarey_desktop
Update for 32-bit SRC Offset term for Small Text and HostData Blt* packets
Clarification for Foreground and Background Colors = Dst Type format
```

```
Change 52226 on 2002/09/18 by efong@efong_r400_win_tor_doc
Added in a whole bunch of visio diagrams for some of the models
Change 52221 on 2002/09/18 by jacarey@fl jcarey desktop
Update CP STQ AVAIL register fields
Change 52204 on 2002/09/18 by mkelly@fl mkelly r400 win laptop
RB asserts when polygon with MSAA = 0,1,2,3 followed
by point list MSAA = 5. If polygon MSAA = 5 or 7 the
test completes as expected.
$/r400/devel/test_list/src/chip/gfx/pa/bugs
make r400sc_sp_sample_cntl_08_bug.emu
Assertion failed: (coverage@errmask) == 0, file ../../../emu lib/model/gfx/rb
/rb_color_model.cpp, line 334
make[2]: [run emu] Error 3 (ignored)
Change 52182 on 2002/09/17 by nbarbier@nbarbier r400 win tor
Updated DAC, TMDS & DVO sections for M3 requirements.
Change 52181 on 2002/09/17 by csampayo@fl_csampayo_r400
Housekeeping update
Change 52180 on 2002/09/17 by csampayo@fl_csampayo_r400
Added 4 new VGT prim tests and updated test list and the test tracker accordingly.
Change 52165 on 2002/09/17 by sbagshaw@sbagshaw
modified to add additional details to one-shot mode
renamed all of the registers to have a DC_ prefix
Change 52045 on 2002/09/17 by kevino@kevino_r400_win_marlboro
tcfux for texture offsets (sample shift)
Change 52031 on 2002/09/17 by vgoel@fl_vgoel2
added bugs 385, 386
Change 52030 on 2002/09/17 by imuskatb@imuskatb r400 win cnimuskatb
```

update Change 52025 on 2002/09/17 by smoss@smoss_crayola_win bug in primlib Change 52024 on 2002/09/17 by rfevreau@rfevreau_r400_win Updates Change 52020 on 2002/09/17 by chwang@chwang_doc_r400_win_cvd Update. Change 52018 on 2002/09/17 by csampayo@fl csampayo r400 Housekeeping update Change 52009 on 2002/09/17 by $mdoggett@MA_MDOGGETT_LT$ Added L2 Block Offsets Change 51990 on 2002/09/17 by frivas@FL FRivas Update to status of a HOS test. Change 51904 on 2002/09/16 by sbagshaw@sbagshaw R400 Test Debug Bus for Toronto Crayola blocks Change 51897 on 2002/09/16 by csampayo@fl csampayo r400 Added 3 new VGT prim tests and updated test list and the test tracker accordingly. Change 51864 on 2002/09/16 by mpersaud@mpersaud_r400_win_tor Added Q_DCCIF_W256ONLY and Q_DCCIF_WC_TIMEOUT[5:0] to interface Change 51792 on 2002/09/16 by frising@ma_frising

v.1.52

-MSAA_NUM_SAMPLES now replaces ARBITRARY_FILTER in FetchMultiSample constant. Users will be expected to set ARBITRARY_FILTER via the instruction when/if needed. Use of constant value for this case will be undefined (and will likely result in MSAA NUM SAMPLES being used).

Change 51786 on 2002/09/16 by kmahler@kmahler_r400_doc_lib

Added description for using Control Flow Boolean Constants and Control Flow Loop Constants.

Change 51784 on 2002/09/16 by kmahler@kmahler r400 doc lib

Changed format of Fetch Instruction that only perform "Set" type operations by removing the destination operand and the 'base' source operand (the constant register operand).

Added the following syntax changes:

- 1) Predicate stack as a destination operand cannot be an export register, thus all predicate setting operation must have a GPR as the destination.
- 2) Predicate setting operations CANNOT specify clamp, negate and absolute modifiers.
- 3) Kill operations CANNOT specify CLAMP.
- 4) ALU instructions that export to Position, Color, or Fog cannot be predicated.
- 5) KILL, MOVA, and PRED SET type instructions may not be coissued with each other.

Added restriction that the shader program cannot use the Address Register Relative Mode within an exec_end or a cexec_end low-level control flow instruction.

Change 51767 on 2002/09/16 by mkelly@fl_mkelly_r400_win_laptop

Update

Change 51748 on 2002/09/16 by $mkelly@fl_mkelly_r400_win_laptop$

Update

Change 51741 on 2002/09/16 by vgoel@fl_vgoel2

added potential bug with dumpview in displaying output of test with high tessellation level

Change 51672 on 2002/09/15 by gregs@laptop1

< added comments about TST_CG_test_sel signal >

Change 51561 on 2002/09/13 by $gregs@gregs_r400_win_marlboro$

Friday update

Change 51495 on 2002/09/13 by $mkelly@fl_mkelly_r400_win_laptop$

```
Update
Change 51490 on 2002/09/13 by csampayo@fl_csampayo_lt_r400
Added to test_list and updated status for test:
r400vgt_multi_prim_reset_index_all_01
Change 51449 on 2002/09/13 by gregs@gregs\_r400\_win\_marlboro
<minor updates>
Change 51438 on 2002/09/13 by jacarey@fl_jcarey_desktop
Adjust Registers for Visibility
Change 51430 on 2002/09/13 by vgoel@fl vgoel2
updated bugs which are resolved
Change 51331 on 2002/09/13 by gregs@gregs\_r400\_win\_marlboro
< SDI and SDP swapped >
Change 51314 on 2002/09/13 by jacarey@fl_jcarey_desktop
Removed ROP=0xCC note from PM4 spec for brush types 0x6 and 0x7
Change 51233 on 2002/09/12 by vgoel@fl vgoel2
added bug 365, PA hanging if vertex export is enabled.
Change 51228 on 2002/09/12 by whui@whui r400 win tor
update idct status
Change 51201 on 2002/09/12 by csampayo@fl_csampayo_r400
1. Added 5 new VGT provoking vtx tests
2. Updated test list and test tracker
Change 51196 on 2002/09/12 by imuskatb@imuskatb_r400_win_cnimuskatb
   updated test after picasso change
Change 51090 on 2002/09/12 by mkelly@fl_mkelly_r400_win_laptop
Update
```

```
Change 51069 on 2002/09/12 by jacarey@fl_jcarey_desktop
Update for oper=gmcdecode: Brush Type 0x6 and 0x7 set bit 15 of result
Change 51068 on 2002/09/12 by jacarey@fl_jcarey_desktop
32x1 Brush Types are not converted to 32bpp by the CP.
Change 51044 on 2002/09/12 by rbell@rbell crayola win cvd
updated
Change 51003 on 2002/09/12 by jowang@jowang_R400_win
add large v downscale case to debug
Change 51001 on 2002/09/12 by jowang@jowang_R400_win
added debug scaling tests
Change 50985 on 2002/09/12 by mzhu@mzhu crayola win tor
Update STEREOSYNC algorithm
Change 50910 on 2002/09/11 by gregs@gregs r400 win marlboro
update
Change 50873 on 2002/09/11 by efong@efong_r400_win_tor_doc
Updated
Change 50836 on 2002/09/11 by kmahler@kmahler r400 doc lib
Made the following changes:
1) Removed ALL references of clauses.
2) Moved Texture Instrution definitions from chapter 3 into Appendix.
3) Removed remaining portion of Chapter 3, since the information was duplicated in
Chapter 4. Chapter 4 is now chapter 3.
4) Made major revisions to Chapter 8 "Programming Syntax And Usage".
- Re-ordered sections to improve flow.
- Updated the low-level control flow syntax.
```

- Added details for the mid-level control flow syntax.

- Updated predication instruction syntax and description.
- Removed previous vector and previous scalar syntax from ALU source operands.
- Enhanced register indexing.
- Updated ALU instruction syntax to properly describe vector and scalar operations that do not conform to the general syntax; mova type, kill type, and predicate setting type operations.
- Corrected the usage of 'instruction' where 'operation' was meant in the description of ALU instructions.
- 5) Removed chapter 10 "Program text file format" since it was redundent information.
- 6) Made minor enhancements to descriptions.
- 7) Added Cross-References where appropriate and started using a standard for these using the form:

```
see section header_number:"header_text" on page #
```

This allows hardcopy readers the ability to easily locate a reference (see section 8.4.2.3.1: "Vector Operations" on page 38 for an example).

- 8) Modified the Appendix:
- Removed the following due to duplication:
 - Syntax Reference.
 - Control Flow from Instruction Reference.
- Moved BNF further down.
- Revised Instruction Reference.
- Updated examples to mid-level syntax.

Change 50802 on 2002/09/11 by $jcox@jcox_r400_win$

Moving to r400/web directory

Change 50800 on 2002/09/11 by $jcox@jcox_r400_win$

Initial Checkin of R400 Web

Change 50799 on 2002/09/11 by mkelly@fl_mkelly_r400_win_laptop

Update...

Change 50758 on 2002/09/11 by csampayo@fl_csampayo_r400

Some housekeeping updates

Change 50728 on 2002/09/11 by mkelly@fl mkelly r400 win laptop

```
Logged sq dump bug for record keeping
Change 50722 on 2002/09/11 by rfevreau@rfevreau_r400\_win
Test #7
Change 50707 on 2002/09/11 by mkelly@fl mkelly r400 win laptop
Simple triangle, polymode back face tri fill
Change 50647 on 2002/09/10 by gregs@gregs_r400_win_marlboro
update (only 3 ERRORs in build_io.log)
Change 50632 on 2002/09/10 by smoss@smoss_crayola_win
bug fix
Change 50623 on 2002/09/10 by smoss@smoss_crayola_win
su tests
Change 50615 on 2002/09/10 by rbell@rbell crayola win cvd
updated
Change 50605 on 2002/09/10 by subad@MA_SUBA
Updated Area numbers of TCD with the new code
Change 50578 on 2002/09/10 by jacarey@fl_jcarey_desktop
Update POLYLINE pseudocode.
Change 50566 on 2002/09/10 by grayc@grayc_r400_win
added minutes for last two meetings
Change 50539 on 2002/09/10 by mkelly@fl_mkelly_r400_win_laptop
Updates...
Change 50485 on 2002/09/10 by csampayo@fl_csampayo_r400
Format update
Change 50456 on 2002/09/10 by llefebvr@llefebvre_laptop_r400
```

New spin of the SQ spec including some interface changes and auto-counter architectural changes (for multipass pixel/vertex shaders). Change 50441 on 2002/09/10 by jimmylau@jimmylau_r400_win_tor Minor changes in CRTC testplan document Change 50413 on 2002/09/10 by jacarey@fl_jcarey_desktop Added Cache Flush and Invalidate TS to Event TimeStamp Write packet Change 50403 on 2002/09/10 by jacarey@fl jcarey desktop Add Result Reuse to Diagram Change 50398 on 2002/09/10 by jacarey@fl jcarey desktop Update Indice count for Polyline packet Change 50347 on 2002/09/09 by csampayo@fl_csampayo_r400 1. Added SU multi-context test 2. Updated test list and test tracker accordingly Change 50340 on 2002/09/09 by gabarca@gabarca crayola win cvd updated after meeting Change 50339 on 2002/09/09 by gregs@gregs_r400_win_marlboro update Change 50332 on 2002/09/09 by gabarca@gabarca crayola win cvd added timing for each VGA mode Change 50326 on 2002/09/09 by nbarbier@nbarbier r400 win tor Updated DVO specs. Change 50296 on 2002/09/09 by hartogs@fl_hartogs Added section on determining the required amount of input data based on the draw initiator and the grouper regsters.

Added section on sanity checks for programming the grouper in major mode 1.

Change 50249 on 2002/09/09 by vgoel@fl vgoel2

closed bug issue for PNTQL Change 50246 on 2002/09/09 by mzhu@mzhu_crayola_win_tor Update ICON and CURSOR X2 magnification algorithm. Change 50213 on 2002/09/09 by frising@ma frising v.1.51 -Add in 32-bit clear color to texture constant layout for FetchMultiSample. This involved replacing $CLAMP_Z$ (which did nothing for FetchMultiSample) with FILTER FUNCTION. Note that FILTER FUNCTION is 3 bits (from 6). Drivers will be required to do a resolve pass when using fast color clear for multisample render targets > 32 bits prior to a multisampe fetch. Currently we only have one such format (4x16). In the future (r[v]450?), it may be desireable to fetch individual samples into the shader pipe. This might be accomplished by a FILTER_FUNCTION opcode that usurps the clear color bits. In this case (low performance anyways) a fast color expand might always be required. But again, this has not yet be designed and is future looking... Change 50206 on 2002/09/09 by smoss@smoss_crayola_win su tests Change 50185 on 2002/09/09 by imuskatb@imuskatb r400 win cnimuskatb change test to crtc2 updated test list Change 50184 on 2002/09/09 by imuskatb@imuskatb r400 win cnimuskatb updated Change 50171 on 2002/09/09 by efong@efong r400 win tor doc Updated Change 50160 on 2002/09/09 by chwang@chwang_doc_r400_win_cvd Update. Change 50156 on 2002/09/09 by csampayo@fl csampayo r400

Updated status for bug# 48

```
Change 50147 on 2002/09/09 by mzhu@mzhu crayola win tor
Update STEREOSYNC algorithm
Change 50142 on 2002/09/09 by grayc@grayc r400 win
update to add cp functions for mti pli.dll compile
Change 50127 on 2002/09/09 by efong@efong r400 win tor doc
Updated
Change 50052 on 2002/09/06 by gregs@gregs_r400_win_marlboro
io_internal.v ready - memory connection missing.
Change 50032 on 2002/09/06 by kevino@kevino_r400_win_marlboro
Updated to give more3 detail about which tests need to be covered for which tex
dimensions
Change 50014 on 2002/09/06 by mkelly@fl mkelly r400 win laptop
Initial check of sc sample control for centers and centroids in the sc_sp
Change 50011 on 2002/09/06 by mzhu@mzhu_crayola_win_tor
Date: September 6, 2002
Add more description for LUT BLACK_OFFSET and WHITE_OFFSET in chapter 11.8
Change icon mix algorithm for data clamping in chapter 11.14
Change cursor mix algorithm for data clamping in chapter 11.16
Change 49997 on 2002/09/06 by mkelly@fl mkelly r400 win laptop
Update new stipple tests
Change 49994 on 2002/09/06 by jacarey@fl jcarey desktop
Correct booleans again for transbitblt
Change 49991 on 2002/09/06 by jacarey@fl_jcarey_desktop
Update boolean settings for
Change 49986 on 2002/09/06 by gabarca@gabarca crayola win cvd
updated after meeting
```

```
Change 49983 on 2002/09/06 by rbell@rbell_crayola_win_cvd
updated for review
Change 49982 on 2002/09/06 by mkelly@fl mkelly r400 win laptop
Update
Change 49952 on 2002/09/06 by rbell@rbell crayola win cvd
updated list (all tests should be done now)!
Change 49943 on 2002/09/06 by vgoel@fl vgoel2
entered bug 48
Change 49938 on 2002/09/06 by csampayo@fl_csampayo_r400
Updated Viz Query controls. Updated test status
Change 49903 on 2002/09/06 by mkelly@fl_mkelly_r400_win_laptop
Update with msaa tests from yesterday
Change 49888 on 2002/09/06 by jacarey@fl jcarey desktop
Document clearing of B4 and C2.x boolean if ROP[7:4] != ROP[3:0] for Blt and Text
packets.
Change 49883 on 2002/09/06 by jacarey@fl_jcarey_desktop
Update for Timing
Change 49873 on 2002/09/05 by gabarca@gabarca crayola win cvd
updated disp doc
Change 49860 on 2002/09/05 by csampayo@fl_csampayo_r400
Added bug# 47
Change 49850 on 2002/09/05 by vgoel@fl_vgoel2
added bugzill bug 337
Change 49832 on 2002/09/05 by csampayo@fl csampayo r400
Added and closed bug# 45
```

```
Change 49828 on 2002/09/05 by mpersaud@mpersaud_r400_win_tor
Updated interface and top level diagram net names to match code.
Change 49822 on 2002/09/05 by csampayo@fl csampayo r400
1. Added 1 new VGT test for event handling
2. Updated test list and test tracker accordingly
Change 49810 on 2002/09/05 by frising@ma_frising
v.1.50
-Remove FMASK_BASE from FetchMultiSample constant. Larry tells me this is now encoded
at a fixed offset from COLORO_BASE.
Change 49802 on 2002/09/05 by frivas@FL_FRivas
Added a HOS Tri-Patch test.
Change 49786 on 2002/09/05 by askende@andi r400 docs
new rev. 1.7
Change 49760 on 2002/09/05 by kcorrell@kcorrell r400 docs marlboro nb
updated version - submitted now to update gart documentation
Change 49722 on 2002/09/05 by frivas@FL_FRivas
Added two HOS tests (Tri-Patch and Line-Patch).
Change 49717 on 2002/09/05 by llefebvr@llefebvre laptop r400
updated spec.
Change 49704 on 2002/09/05 by mkelly@fl mkelly r400 win laptop
Log a local sc bug
Change 49698 on 2002/09/05 by bbuchner@fl_bbuchner_r400_win
\ensuremath{\mathsf{upd}} ated spec to match changes made for TE timing
Change 49695 on 2002/09/05 by mkelly@fl mkelly r400 win laptop
Update
```

```
Change 49681 on 2002/09/05 by rbell@rbell_crayola_win_cvd
Added CSC tests, and updated LUT list (gamma 2.5 fill)
Change 49595 on 2002/09/04 by csampayo@fl csampayo r400
1. Added bug test case
2. Updated bug# 43 on Bug Tracker
Change 49594 on 2002/09/04 by vgoel@fl vgoel2
added bug 32 to bugzilla (bug 333)
Change 49574 on 2002/09/04 by smoss@smoss_crayola_win
SU test
Change 49572 on 2002/09/04 by efong@efong r400 win tor doc
Initial version
Change 49564 on 2002/09/04 by bryans@bryans crayola doc
Update for new regression times
Change 49562 on 2002/09/04 by bbuchner@fl_bbuchner_r400_win
removed unused interfaces.
fixed output unit data types for don't care data.
Change 49547 on 2002/09/04 by mkelly@fl_mkelly_r400_win_laptop
Update to be current with Bugzilla
Change 49546 on 2002/09/04 by rfevreau@rfevreau r400 win
Minor fix
Change 49543 on 2002/09/04 by jowang@jowang R400 win
updated with testcase names
Change 49525 on 2002/09/04 by mkelly@fl_mkelly_r400_win_laptop
Change test name, update tracker...
Change 49479 on 2002/09/04 by mpersaud@mpersaud_r400_win_tor
```

Updated interface and top level diagram to reflect removal of hdslewfilt and addition of syncgen. Change 49477 on 2002/09/04 by jacarey@fl_jcarey2 Clarified Brush Expansion Change 49462 on 2002/09/04 by bryans@bryans_crayola_doc Update as per status meeting Change 49417 on 2002/09/03 by gabarca@gabarca_crayola_win_cvd Finished cleaning up the test plan and gave a name to each test Change 49374 on 2002/09/03 by mmantor@mmantor r400 win added sc output of centers and xy data. Also passed the xy data on the ij bus between the SC and SQ Change 49354 on 2002/09/03 by mkelly@fl mkelly r400 win laptop Initial check of MSAA centermost determination. Change 49340 on 2002/09/03 by efong@efong r400 win tor doc Updated to the last review Change 49336 on 2002/09/03 by bryans@bryans_crayola_doc Update Change 49332 on 2002/09/03 by vliu@vliu r400 cnvliu100 win cvd Update Change 49306 on 2002/09/03 by imuskatb@imuskatb r400 win cnimuskatb updated Change 49296 on 2002/09/03 by jhoule@MA_JHOULE Bringing back the PostJune15 into official location. Version is 1.49

Change 49290 on 2002/09/03 by jhoule@MA JHOULE

Renamed SAMPLE POSITION to SAMPLE LOCATION in TFetchInstr.

```
Helps to reduce confusion with TP loops (esp. anisotropy walk taking
point/bilinear/arbitrary samples at different positions).
Change 49285 on 2002/09/03 by gregs@gregs_r400_win_marlboro
Update ROM/CG/CGM/DBG
Change 49282 on 2002/09/03 by chwang@chwang_doc_r400_win_cvd
Update.
Change 49267 on 2002/09/03 by efong@efong_r400_win_tor_doc
Updated
Change 49244 on 2002/09/03 by llefebvr@llefebvre laptop r400
new spec
Change 49234 on 2002/09/02 by gabarca@gabarca_crayola_win_cvd
updated
Change 49232 on 2002/09/02 by askende@andi_r400_docs
fixed a typo on MUL_PREV2
Change 49141 on 2002/08/31 by askende@andi r400 docs
new rev of the spec ...rev.1.6
Change 49139 on 2002/08/30 by gabarca@gabarca crayola win cvd
updated test names
Change 49133 on 2002/08/30 by csampayo@fl_csampayo_r400
Revised tests requirements for VGT and SU
Change 49074 on 2002/08/30 by csampayo@fl_csampayo_r400
Closed bug# 24
Change 49072 on 2002/08/30 by rfevreau@rfevreau_r400_win
Updated to documentation
Change 49066 on 2002/08/30 by csampayo@fl csampayo r400
```

```
Updated status for the following tests:
r400vgt_suppress_eop_01
r400vgt_suppress_eop_02
r400vgt suppress eop 03
r400vgt_suppress_eop_04
Change 49055 on 2002/08/30 by khabbari@khabbari_r400_win
added start phase
Change 49040 on 2002/08/30 by grayc@grayc_r400_win
added initial notes for running a chip level graphic tests
Change 49017 on 2002/08/30 by jayw@MA JAYW
added 3d addressing to tile address
Change 48997 on 2002/08/30 by mzhu@mzhu_r400\_win\_tor
Update chapter 10.6 - 10.12
Change 48971 on 2002/08/30 by mkelly@fl_mkelly_r400_win_laptop
Potential bug in line texturing/window scissor
Change 48962 on 2002/08/30 by jacarey@fl jcarey desktop
Removed StatMux Connections from Visio Diagram
The connections are listed in the CP Spec.
Change 48937 on 2002/08/29 by gabarca@gabarca crayola win cvd
assigned test names except render graphics text display
Change 48903 on 2002/08/29 by khabbari@khabbari r400 win
added urgency signal to lb/dcp interface
Change 48900 on 2002/08/29 by jacarey@fl_jcarey_desktop
Updates for controlling queued vs. non-queued transactions from micro engine.
Change 48890 on 2002/08/29 by jayw@MA JAYW
first try at fragment surface addresses and formats
```

```
Change 48888 on 2002/08/29 by jacarey@fl_jcarey_desktop
Update sign extension note for the PLY_NEXTSCAN packet.
Change 48882 on 2002/08/29 by gregs@gregs_r400_win_marlboro
<pad-ring in progress >
Change 48874 on 2002/08/29 by lkang@lkang r400 win tor
update
Change 48865 on 2002/08/29 by mkelly@fl_mkelly_r400_win_laptop
       * Basic multi-texture tests
* 16 parameter, 64 dword texture test
* Expand VFD to handle up to 16 textures,
  see r400sc tri 16 par 64 dwords 01.cpp for example useage
Change 48858 on 2002/08/29 by rbell@rbell_crayola_win_cvd
Finished more D2 tests
Change 48839 on 2002/08/29 by llefebvr@llefebvre_laptop_r400
Updated the SQ->SP interface. Added comment on the Constant load bus.
Change 48832 on 2002/08/29 by jacarey@fl jcarey desktop
Remove direct access to the Ib1 and Ib2 base/size fetchers
Change 48824 on 2002/08/29 by jacarey@fl jcarey desktop
Clarification for memory usage for Brush and Palette
Change 48814 on 2002/08/29 by mdoggett@MA_MDOGGETT_LT
Updated L2 formats table. Added L2 sector address maps. Started adding new L1 block
offset calcs per format.
Change 48813 on 2002/08/29 by kevino@kevino_r400_win_marlboro
added rb_assert test case.
Change 48810 on 2002/08/29 by efong@efong r400 win tor doc
Updated
```

```
Change 48805 on 2002/08/29 by frivas@FL FRivas
Update to HOS section for new RECT patch tests.
Change 48786 on 2002/08/29 by jacarey@fl jcarey2
Micro Engine Updates for NQ Flag
Change 48778 on 2002/08/29 by jacarey@fl jcarey2
Add NQ Flag Processing....
Change 48768 on 2002/08/29 by csampayo@fl_csampayo_r400
Updated description for the following tests:
r400vgt multi context 04
r400vgt_multi_context_05
r400vgt multi context 06
r400vgt_multi_context_07
r400vgt_multi_context_08
r400vgt multi context 09
r400vgt multi context 10
r400vgt multi context 11
Change 48756 on 2002/08/29 by rbell@rbell crayola win cvd
finished premultiplied alpha, some date changes
Change 48677 on 2002/08/28 by gabarca@gabarca_crayola_win_cvd
Updated the ATTR_PPAN =8, 8 dot case
Change 48669 on 2002/08/28 by jowang@jowang R400 win
updated for tests and precision
Change 48668 on 2002/08/28 by jayw@MA JAYW
frag in progress
Change 48649 on 2002/08/28 by vgoel@fl_vgoel2
entered non-reported bug reports to bugzilla and entered their bug number
Change 48638 on 2002/08/28 by vgoel@fl vgoel2
added few more tests (hos and tone mapping, stereo vision)
```

```
Change 48623 on 2002/08/28 by jacarey@fl jcarey2
Mono Brush Unpacking
Change 48596 on 2002/08/28 by khabbari@khabbari r400 win
tvout spec for standard tv released
Change 48557 on 2002/08/28 by imuskatb@imuskatb r400 win cnimuskatb
   fixed contorl signal crc calculation
   updated quick dacb test
   added hpd to API
   added hpd test
Change 48547 on 2002/08/28 by georgev@ma georgev
Better support for floats and ints in range.
Change 48537 on 2002/08/28 by mkelly@fl_mkelly_r400\_win_laptop
JSS 4x4 simple triangle
Change 48505 on 2002/08/28 by rbell@rbell_crayola_win_cvd
updates
Change 48487 on 2002/08/28 by ashishs@fl ashishs r400 win
CL tests: adding more UCP combo tests and updating tracker.
Change 48463 on 2002/08/28 by jacarey@fl jcarey desktop
Miscellaneous Spec Updates
Comments in Microcode for 2D Processing.
Change 48462 on 2002/08/28 by jacarey@fl jcarey desktop
Add B19 Boolean and Remove SRC_SC_BOTTOM_RIGHT_GMC default value
Change 48429 on 2002/08/27 by tshah@fl_tshah
performance counters added with document changes
Change 48421 on 2002/08/27 by ashishs@fl_ashishs_r400_win
opened bug r400cl_bary_texture_08_bug.cpp again and modified desciption.
```

```
Change 48419 on 2002/08/27 by vgoel@fl vgoel2
updated bug report
Change 48414 on 2002/08/27 by ashishs@fl ashishs r400 win
deleted a redundant row related with the bug test r400cl bary texture 08 bug.cpp
Change 48409 on 2002/08/27 by ashishs@fl ashishs r400 win
deleted a redundant row related with the bug test r400cl_bary_texture_08_bug.cpp
Change 48406 on 2002/08/27 by gregs@gregs_r400_win_marlboro
Based onb RV350 design - R400 package definition (FC BGA pinout done (first revision)).
Change 48402 on 2002/08/27 by csampayo@fl_csampayo_r400
1. Updated test VFD for sourcing tex coord from vertex
2. Updated Bug Tracker accordingly
Change 48389 on 2002/08/27 by mzhu@mzhu r400 win tor
Update description for overlay gamma correction
Change 48371 on 2002/08/27 by grayc@grayc_r400_win
update for 8/23/2002 minutes
Change 48341 on 2002/08/27 by jacarey@fl_jcarey2
Final Update from Joe
Change 48327 on 2002/08/27 by ygiang@ygiang r400 win marlboro p4
added: more sp tests
Change 48323 on 2002/08/27 by jacarey@fl_jcarey2
Update Foreground and Background Color Processing
Change 48322 on 2002/08/27 by ashishs@fl_ashishs_r400_win
update
Change 48290 on 2002/08/27 by jacarey@fl_jcarey2
Correction to CP STAT
```

```
Change 48289 on 2002/08/27 by bryans@bryans_crayola_doc
Update status
Change 48284 on 2002/08/27 by gregs@gregs\_r400\_win\_marlboro
< fixed PLL post divider control registers >
Change 48283 on 2002/08/27 by jacarey@fl jcarey2
Update CP_STAT register bits
Change 48267 on 2002/08/27 by jacarey@fl_jcarey2
Add Boolean 19 (Misc Command)
Change 48266 on 2002/08/27 by jacarey@fl jcarey2
More Updates
Change 48264 on 2002/08/27 by csampayo@fl csampayo r400
Bug test case
Change 48259 on 2002/08/27 by csampayo@fl_csampayo_r400
1. Added 1 new SU point sprite test
2. Updated test_list and test tracker accordingly
Change 48244 on 2002/08/27 by tshah@fl_tshah
rbbm interrupt logic and few changes in documentation
Change 48235 on 2002/08/27 by jimmylau@jimmylau r400 win tor
Update CRTC implementation specs :
update section on forcing H_COUNT & V_COUNT
Change 48226 on 2002/08/27 by bryans@bryans_crayola_doc
Update for arch/arch_<archname>.h change
Change 48223 on 2002/08/27 by jacarey@fl_jcarey2
Updated Small Text Utility
Change 48218 on 2002/08/27 by mkelly@fl mkelly r400 win laptop
```

```
Bug...
Change 48210 on 2002/08/27 by jacarey@fl_jcarey2
Utility to generate small_text characters.
Change 48187 on 2002/08/26 by georgev@ma_georgev
Added a few more comments.
Change 48184 on 2002/08/26 by gabarca@gabarca crayola win cvd
added actual VESA mode test
Change 48183 on 2002/08/26 by gabarca@gabarca crayola win cvd
detailed VESA modes
Change 48179 on 2002/08/26 by rbell@rbell_crayola_win_cvd
Updated schedule (lut bypass, d2 tests).
Change 48168 on 2002/08/26 by gregs@gregs_r400_win_marlboro
update ...
Change 48155 on 2002/08/26 by mmantor@mmantor r400 win
updated 1st clk transfer of the sc to sq interface to define quad mask bits in the
correct hardware/emulator order sp3 => sp0
Change 48144 on 2002/08/26 by csampayo@fl csampayo r400
Expanded format to include Bugzilla report# and, sorted by date.
Change 48123 on 2002/08/26 by efong@efong r400 win tor doc
Updated with the chip level archs and configs
Change 48097 on 2002/08/26 by nbarbier@nbarbier_r400_win_tor
HPD Updates
Change 48096 on 2002/08/26 by mkelly@fl mkelly r400 win laptop
Update
```

```
Change 48092 on 2002/08/26 by llefebvr@llefebvre_laptop_r400
Added the new SQ->SP instruction interface.
Change 48070 on 2002/08/26 by efong@efong_r400_win_tor_doc
Updated
Change 48064 on 2002/08/26 by chwang@chwang doc r400 win cvd
Update.
Change 48060 on 2002/08/26 by imuskatb@imuskatb_r400_win_cnimuskatb
updated
Change 48051 on 2002/08/26 by vliu@vliu_r400\_cnvliu100\_win\_cvd
Update
Change 48043 on 2002/08/26 by rbell@rbell crayola win cvd
updated
Change 48042 on 2002/08/26 by ashishs@fl ashishs r400 win
update
Change 48039 on 2002/08/26 by mkelly@fl_mkelly_r400\_win_laptop
Memory crash when shader file doesn't exist..
Change 48035 on 2002/08/26 by rfevreau@rfevreau r400 win
Update
Change 48028 on 2002/08/26 by tshah@fl tshah
more description for rbbm int * registers for reset condition
Change 48021 on 2002/08/26 by mkelly@fl_mkelly_r400_win_laptop
Textured line where ST are exported directly to RGBA to visulize texture coordinates
in color. Current there is a bug in the LLC quad pixel ST value when the primitive is
not quad-aligned.
```

Change 48009 on 2002/08/26 by rfevreau@rfevreau_r400_win

Updates Change 47998 on 2002/08/26 by kevino@kevino_r400_win_marlboro Renamed TP to TPTC changed "L2 filter no grouping" to "64 unique probe addresses" Change 47985 on 2002/08/26 by efong@efong_r400_win_tor_doc New version of it after review Change 47982 on 2002/08/26 by efong@efong_r400_win_tor_doc Deleted User Simulation Model Guide because renamed to VideoIp User Simulation Model Guide Change 47981 on 2002/08/26 by efong@efong_r400_win_tor_doc Changed name from the R400 User Simulation Model guide to VideoIP Change 47968 on 2002/08/25 by gabarca@gabarca crayola win cvd updated list of tests Change 47967 on 2002/08/25 by csampayo@fl csampayo r400 1. Added 1 new SU point sprite tests 2. Updated test list and the test tracker accordingly Change 47954 on 2002/08/25 by gabarca@gabarca_crayola_win_cvd changed mono reg test name with mono and memory mapped reg test Change 47927 on 2002/08/23 by gabarca@gabarca crayola win cvd updated test plan Change 47906 on 2002/08/23 by mzhu@mzhu_r400_win_tor Add CRTC Event Trigger Signal Generation Add Force V_COUNT, H_COUNT and field polarity now Add Force H COUNT now Update StereoSync

Update digital TV timing
Re-order chapter 10.6 - 10.10

Change 47895 on 2002/08/23 by $mkelly@fl_mkelly_r400_win_laptop$

```
* Line list, start vertex at -8190 in HW space, clipped at -4096 Screen Space
* Line list, textured
Change 47874 on 2002/08/23 by frising@ma_frising
-remove statement about always using centriod sampling with jittered super-sampling.
We may give meaning to both. No version bump.
Change 47867 on 2002/08/23 by frising@ma frising
v.1.48
-Added SAMPLE_POSITION to texture instruction.
Specifies sampling position for gradient/LOD correction. Centroid of fragment should
always be used with jittered super-sampling.
  0=Centroid of fragment
   1=Center of fragment
Change 47781 on 2002/08/23 by rbell@rbell_crayola_win_cvd
Some D2 updates
Change 47777 on 2002/08/23 by rbell@rbell crayola win cvd
Completed B&W offset tests
Change 47775 on 2002/08/23 by kevino@kevino_r400_win_marlboro
Updates
Change 47774 on 2002/08/23 by omesh@ma_omesh
An upto date spreadsheet with accurate numbers showing RB directed tests status. This
does not yet include tests for Gamma/Degamma and I also think Frank may need to update
his section.
Change 47768 on 2002/08/23 by kevino@kevino r400 win marlboro
1st cut at TP verification xls
Change 47743 on 2002/08/23 by csampayo@fl_csampayo_r400
Update format
```

Change 47741 on 2002/08/23 by vgoel@fl vgoel2

closed bug 6 and added bug 14

```
Change 47720 on 2002/08/23 by ygiang@ygiang_r400_win_marlboro_p4
update
Change 47717 on 2002/08/23 by mkelly@fl mkelly r400 win laptop
Simple single line list
Change 47687 on 2002/08/22 by efong@efong r400 win tor doc
Updated
Change 47632 on 2002/08/22 by vliu@vliu_r400_cnvliu100_win_cvd
Fixed colour space Excel sheet.
Change 47601 on 2002/08/22 by mzhu@mzhu\_r400\_win\_tor
Add 64bpp digital output format
Change 47595 on 2002/08/22 by tshah@fl tshah
typo fix for real time busy equation page-29
Change 47579 on 2002/08/22 by dglen@dglen r400 dell
Adding new file
Change 47535 on 2002/08/22 by vgoel@fl_vgoel2
updated status of bug reports
Change 47522 on 2002/08/22 by csampayo@fl csampayo r400
1. Added 10 new VGT multi-context tests
2. Updated test_list and the test tracker accordingly
Change 47517 on 2002/08/22 by dglen@dglen_r400_dell
Added CRTC snapshot description
Change 47509 on 2002/08/22 by mpersaud@mpersaud_r400_win_tor
Removed some signals between dispout, crtc and the tvout.
Added interface with DCCG
Change 47491 on 2002/08/22 by mkelly@fl_mkelly_r400_win_laptop
```

```
Add two test descriptions, update comments in test
Change 47461 on 2002/08/21 by csampayo@fl_csampayo_r400
Updated for new vgt tests
Change 47454 on 2002/08/21 by ashishs@fl ashishs r400 win
CL test:r400cl ucp pointlist 01
64 point sprites with 6 textures and 6 ucp's enabled with point size set in PA SU state
register and also in PA_CL_POINT registers for clipping. Point Sprite UCP mode set to
'3' viz. always expand and clip.
Change 47447 on 2002/08/21 by efong@efong_r400_win_tor_doc
updated
Change 47434 on 2002/08/21 by dglen@dglen r400 dell
Change in section 7.7
Change 47424 on 2002/08/21 by rbell@rbell crayola win cvd
Updated for blending tests
Change 47411 on 2002/08/21 by gregs@gregs_r400_win_marlboro
<display names changes update ++ >
Change 47344 on 2002/08/21 by vgoel@fl vgoel2
added issue related with loading floating point texture image in local tone-mapping
Change 47336 on 2002/08/21 by askende@andi r400 docs
modified the instruction interface from SQ to SP
Change 47324 on 2002/08/21 by vgoel@fl_vgoel2
vertex export bug related with number of position exports
Change 47305 on 2002/08/21 by jimmylau@jimmylau_r400_win_tor
Make changes to CRTC Controller Implementation specs
modify sections on : Generation of V UPDATE
add sections on : CRTC BLACK COLOR
                  disable CRTC in a safe place within the frame
                  force VSYNC next line mode
```

digital TV timings sample CRTC counts CRTC snapshots CRTC flow control

Change 47242 on 2002/08/21 by jacarey@fl jcarey desktop

Document Brush_Decode_Idle boolean

Change 47232 on 2002/08/21 by jacarey@fl jcarey desktop

- 1. Clarify clearing of 2D Allocation Flags
- 2. Added Brush Decode Busy boolean as bit 19...

Change 47229 on 2002/08/21 by vgoel@fl_vgoel2

added bug report for vertex export instruction ${\it em0}$

Change 47219 on 2002/08/21 by jacarey@fl jcarey desktop

Fix order of background and foreground colors

Change 47176 on 2002/08/20 by frising@ma frising

v.1.47

-Make TRI_JUICE field 2 bits (like r350) with values: 0=0, 1=1/6, 2=1/4, 3=3/8. Also noted that trilinear filtering remains piecewise linear and continuous.
-Fix COLOR_FORMAT_OUT and COLOR_NUMBER_OUT fields in texture constant (used for fetchmulitsample) that were accidentally munged in a prior check-in.

Change 47174 on 2002/08/20 by dglen@dglen_r400_dell

Minor fixes to section 7

Change 47173 on 2002/08/20 by $mzhu@mzhu_r400_win_tor$

update DxGRPH register double buffer with STEREO SELECT

Change 47131 on 2002/08/20 by frising@ma_frising

v.1.46

- -Updated descriptions of get opcodes. Most notably specified that GetWeights now returns a horizontal and vertical lerp factor.
- -Specified that the DATA_FORMAT field in texture constant can use any of the data formats in the DATA_FORMAT table while the cooresponding field in the vertex instruction can only use data formats valid for vertex data (also documented in DATA FORMAT table).

```
Change 47120 on 2002/08/20 by mzhu@mzhu r400 win tor
Update test plan for third milestone
Change 47113 on 2002/08/20 by rbell@rbell crayola win cvd
Completed alpha mode 2 tests
Change 47111 on 2002/08/20 by mpersaud@mpersaud r400 win tor
Updated interface diagram and added hd slew filter as its own block.
Change 47099 on 2002/08/20 by mzhu@mzhu_r400_win_tor
Add test plan for third milestone. Update black/white offset tests
Change 47065 on 2002/08/20 by mzhu@mzhu_r400_win_tor
Add LUT floating point data process, update DxGRPH register double buffer with
STEREO SELECT
Change 47061 on 2002/08/20 by dglen@dglen r400 dell
Update to Display Outline for new CRTC features
Change 47035 on 2002/08/20 by rbell@rbell_crayola_win_cvd
Added totals, first D2 test is done.
Change 47021 on 2002/08/20 by vliu@vliu_r400_cnvliu100_win_cvd
Initial revision
Change 47007 on 2002/08/20 by vliu@vliu r400 cnvliu100 win cvd
Update
Change 47004 on 2002/08/20 by vliu@vliu_r400_cnvliu100_win_cvd
Initial revision
Change 46950 on 2002/08/20 by mdoggett@MA_MDOGGETT_LT
Updated DCC0 clients and GRB0 clients. Added separate VGA input to MHC.
Change 46945 on 2002/08/20 by jacarey@fl jcarey2
```

Clarifications to Source and Destination formats for 2D.

Change 46924 on 2002/08/19 by gabarca@gabarca_crayola_win_cvd updated registers Change 46914 on 2002/08/19 by csampayo@fl_csampayo_r400 1. Added 2 new VGT test for multi context coverage 2. Updated test list and the test tracker appropriately Change 46911 on 2002/08/19 by nluu@nluu_r400_doclib_cnnb - update forces Change 46895 on 2002/08/19 by mkelly@fl_mkelly_r400_win_laptop Primlib utility to check for double hit pixels in sc_quad_pair_proc_out.dmp Concentric circle test to do a preliminary check on the new utility Change 46891 on 2002/08/19 by lkang@lkang r400 win tor updated for M2 & M3 Change 46883 on 2002/08/19 by nluu@nluu r400 doclib cnnb - update forces Change 46851 on 2002/08/19 by rbell@rbell_crayola_win_cvd Added double-buffer tests Change 46850 on 2002/08/19 by rfevreau@rfevreau r400 win Updated Status Change 46847 on 2002/08/19 by csampayo@fl csampayo r400 Added instructions at the top Change 46813 on 2002/08/19 by smoss@smoss_crayola_win Bug Change 46778 on 2002/08/19 by imuskatb@imuskatb r400 win cnimuskatb

updated

Change 46777 on 2002/08/19 by csampayo@fl_csampayo_r400 1. Added 4 new SU polymode degenerate tests 2. Updated test_list and test tracker accordingly Change 46766 on 2002/08/19 by rbell@rbell_crayola_win_cvd updated Change 46761 on 2002/08/19 by efong@efong r400 win tor doc Updated Change 46758 on 2002/08/19 by nluu@nluu_r400_doclib_cnnb - update Change 46751 on 2002/08/19 by ashishs@fl ashishs r400 win corrected last submission Change 46750 on 2002/08/19 by ashishs@fl ashishs r400 win Hardware Accuracy related bug reported and documented. (r400cl_bary_texture_08_bug.cpp, interpolator bug) Change 46749 on 2002/08/19 by vliu@vliu_r400_cnvliu100_win_cvd Update Change 46735 on 2002/08/19 by jasif@jasif_r400_win_tor Updated. Change 46726 on 2002/08/19 by sbagshaw@sbagshaw R400 Programming Guide for Toronto R400 Blocks Kaleidoscope IP Change 46724 on 2002/08/19 by chwang@chwang_doc_r400_win_cvd Update. Change 46695 on 2002/08/18 by csampayo@fl_csampayo_r400

1. Added 8 new SU polymode tests

2. Updated test_list and the test tracker accordingly

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```
Change 46651 on 2002/08/16 by gabarca@gabarca_crayola_win_cvd
Updated interface with display
Change 46594 on 2002/08/16 by grayc@grayc_r400_win
doc to track minutes of validation meeting
Change 46565 on 2002/08/16 by peterp@MA PETE LT
Corrected SQ and TC "RV400 Qty" factors
Change 46560 on 2002/08/16 by rbell@rbell_crayola_win_cvd
updated
Change 46559 on 2002/08/16 by vgoel@fl_vgoel2
updated the "bug closed" and "change number" for bugs 4 & 5
Change 46554 on 2002/08/16 by vgoel@fl vgoel2
added bug report for multi-context HOS test (bug 8)
Change 46547 on 2002/08/16 by jacarey@fl jcarey2
Update for 2D Constants
Change 46536 on 2002/08/16 by jacarey@fl_jcarey2
Miscellaneous
Change 46530 on 2002/08/16 by vgoel@fl vgoel2
added description for fix for bug 5 and 6 reported and added bug 7 description
Change 46513 on 2002/08/16 by rbell@rbell crayola win cvd
updated
Change 46512 on 2002/08/16 by rbell@rbell_crayola_win_cvd
Updates
Change 46500 on 2002/08/16 by jacarey@fl jcarey2
Updates for 2D Brush Decoding.
```

```
Change 46385 on 2002/08/15 by jowang@jowang_R400_win
changed coefficient range tests
Change 46324 on 2002/08/15 by vgoel@fl vgoel2
added black pixels in white triangle bug
Change 46270 on 2002/08/15 by gregs@gregs r400 win marlboro
< changed direction of analog ports in io.v >
Change 46269 on 2002/08/15 by gregs@gregs\_r400\_win\_marlboro
< added scratch register >
Change 46267 on 2002/08/15 by jacarey@fl_jcarey2
Update for Immediate Data Writes
Change 46260 on 2002/08/15 by csampayo@fl csampayo r400
Updated format
Change 46255 on 2002/08/15 by csampayo@fl csampayo r400
1. Added 3 new SU tests
2. Updated test list and the test tracker accordingly
Change 46243 on 2002/08/15 by ygiang@ygiang_r400_win_marlboro_p4
update
Change 46239 on 2002/08/15 by vgoel@fl vgoel2
reported two bugs
Change 46236 on 2002/08/15 by rbell@rbell_crayola_win_cvd
Updated schedule
Change 46206 on 2002/08/15 by jacarey@fl_jcarey2
Update Description of Vertex and Pixel Constants for 2D Processing.
Change 46187 on 2002/08/14 by georgev@ma georgev
Updated spreadsheets.
```

```
Change 46183 on 2002/08/14 by gabarca@gabarca_crayola_win_cvd
Added handshake section
Change 46163 on 2002/08/14 by mzhu@mzhu r400 win tor
Update alpha blend and force graphics or overlay data to "0" for overlay-only or
graphics-only case
Change 46138 on 2002/08/14 by llefebvr@llefebvre_laptop_r400
Changed the MASK mnemonics to KILL.
Added DST opcode.
Added MUL_PREV2 opcode.
Reordered the opcodes in primlib and SP.
Implemented the new KILL and SET SCALAR opcodes, they are now all comparing the ALPHA
channel to 0.0f (instead of comapring against the RED channel).
Change 46126 on 2002/08/14 by efong@efong_r400_win_tor_doc
New document on chip integration tests
Change 46125 on 2002/08/14 by efong@efong_r400_win_tor_doc
Updated
Change 46111 on 2002/08/14 by mkelly@fl mkelly r400 win laptop
Update...
Change 46099 on 2002/08/14 by askende@andi r400 docs
new rev of the spec.
Change 46096 on 2002/08/14 by mpersaud@mpersaud_r400_win_tor
Updated specs to match Xilleon's tvout.
Change 46024 on 2002/08/14 by mzhu@mzhu_r400_win_tor
Update black/white offset
Change 46010 on 2002/08/14 by jacarey@fl_jcarey2
Update Setting 2D Boolean B0 if Brush Type=0xF and SRC TYPE = Color
Change 45994 on 2002/08/14 by jhoule@MA JHOULE
```

```
TFetchInstr:
 Added SetGradientsH and SetGradientsV opcodes.
  Changed SetFilter4Weights opcode number.
 LOD_BIAS_{H|V} are now 7 bits, range [-4, 4).
 Added USE REG GRADIENTS.
TFetchConst:
  Changed description of TRI JUICE.
Change 45907 on 2002/08/14 by bryans@bryans_crayola_doc
Updated...
Change 45889 on 2002/08/14 by jacarey@fl_jcarey2
Updates to Diagrams for Timing...
Change 45888 on 2002/08/14 by jacarey@fl jcarey2
Update for Im Load
Change 45863 on 2002/08/13 by gabarca@gabarca crayola win cvd
put chapter 16 in a table
Change 45832 on 2002/08/13 by gabarca@gabarca_crayola_win_cvd
updated list of functional changes respect to previous chips
Change 45810 on 2002/08/13 by gabarca@gabarca_crayola_win_cvd
updated functional changes respect to previous chips
Change 45754 on 2002/08/13 by gregs@gregs r400 win marlboro
added examples of power state transitions programming via CP real time command streams
+ added description of spread spectrum circuits and registers.
Change 45743 on 2002/08/13 by jacarey@fl_jcarey2
Correct SRC_X calculation for HostData* Packets
Change 45680 on 2002/08/13 by gabarca@gabarca_crayola_win_cvd
Updated sec 16
Change 45674 on 2002/08/13 by gabarca@gabarca crayola win cvd
```

```
Added section 16 Changes respect to previous ATI chips
Change 45673 on 2002/08/13 by mkelly@fl_mkelly_r400_win_laptop
Expand line width basic functionality...
Change 45657 on 2002/08/13 by csampayo@fl_csampayo_r400
1. Started log for bug #3
2. Expanded format to include accounting of bugs
Change 45615 on 2002/08/13 by jhoule@MA_JHOULE
Updated various TP/TC features.
Change 45512 on 2002/08/12 by askende@andi_r400_docs
new rev. 1.4
Change 45507 on 2002/08/12 by mzhu@mzhu r400 win tor
Update alpha blend mode 1 and 3
Change 45462 on 2002/08/12 by chwang@chwang doc r400 win cvd
Update.
Change 45423 on 2002/08/12 by efong@efong_r400_win_tor_doc
Updated
Change 45420 on 2002/08/12 by chwang@chwang_doc_r400_win_cvd
Update.
Change 45414 on 2002/08/12 by csampayo@fl csampayo lt r400
Updated status for the following tests:
r400su_point_sprite_01
r400su_point_sprite_02
r400su_point_sprite_03
r400su_point_sprite_04
r400su_point_sprite_05
r400su_point_sprite_06
```

Change 45405 on 2002/08/12 by mzhu@mzhu_r400_win_tor

```
Update for alpha blend key mode
Change 45398 on 2002/08/12 by imuskatb@imuskatb_r400\_win\_cnimuskatb
   Updated DISPOUT
  Added TAKEN to double buffer
  M2 Dispout test
  Updated Quick Emu
Change 45391 on 2002/08/12 by tshah@fl tshah
typo - CP_RBBM_dma_busy is used for one of the wait until conditions
Change 45379 on 2002/08/12 by ashishs@fl_ashishs_r400_win
2nd bug tested and documented
Change 45364 on 2002/08/11 by ygiang@ygiang r400 win marlboro p4
added: dot3 and dot4 shader tests
Change 45316 on 2002/08/09 by csampayo@fl csampayo r400
1. Updated image size for tests: r400su_point_sprite_01 and _02
2. Added 4 more SU point sprite tests
3. Updated test_list and test tracker accordingly
Change 45308 on 2002/08/09 by tho@tho r400 win
new doc'
Change 45305 on 2002/08/09 by tho@tho r400 win
run regress docs
Change 45292 on 2002/08/09 by whui@whui_r400_win_tor
update surface properties registers
Change 45262 on 2002/08/09 by georgev@ma_georgev
Updated.
Change 45232 on 2002/08/09 by mkelly@fl_mkelly_r400_win_laptop
Update...
Change 45220 on 2002/08/09 by mkelly@fl mkelly r400 win laptop
```

Nan retain/kill on 2 vector exports from shader bug... Change 45195 on 2002/08/09 by nbarbier@nbarbier_r400_win_tor Initial Revision Change 45180 on 2002/08/09 by bryans@bryans_crayola_doc Update per last meeting Change 45177 on 2002/08/09 by gregs@gregs_r400_win_marlboro updated direct access to ROM pins (for writing). Change 45156 on 2002/08/09 by dclifton@dclifton r400 Updated zmin/zmax pinout info, updated area estimate Change 45045 on 2002/08/08 by $ashishs@fl_ashishs_r400_win$ CL test: A test to determine if the clip guard band works properly and that trivial reject works. update to test tracker and test list. Change 45021 on 2002/08/08 by nbarbier@nbarbier_r400_win_tor Updated GENERICA & GENERICB inputs. Change 45018 on 2002/08/08 by frivas@FL FRivas Update to HOS tests. Added edge detector test to "sheet 1" and accounted for it in the totals. Change 44992 on 2002/08/08 by frivas@FL FRivas Updated status of different HOS tests. Change 44907 on 2002/08/08 by csampayo@fl csampayo r400 1. Initial check in of Bug Tracker 2. Added bug test case Change 44840 on 2002/08/08 by jacarey@fl_jcarey2 Correct note for vgt busy status signal.

Change 44839 on 2002/08/08 by jacarey@fl jcarey2

```
Remove 3D from the GradFill and AlphaBlend 2D packets.
Change 44771 on 2002/08/07 by jacarey@fl_jcarey2
Corrections to Packet Pseudocode.
Change 44759 on 2002/08/07 by dclifton@dclifton_r400
Updated for clipped polymode lines and points and updated point-line geometry drawing.
Change 44741 on 2002/08/07 by csampayo@fl csampayo r400
Updated status for the following tests:
r400su_point_sprite_01.cpp
r400su_point_sprite_02.cpp
Change 44684 on 2002/08/07 by lkang@lkang r400 win tor
2nd milestone review
Change 44680 on 2002/08/07 by imuskatb@imuskatb r400 win cnimuskatb
  TMDS M2 Test
  Updated Test list
Change 44665 on 2002/08/07 by jacarey@fl_jcarey2
1. Specify limit of ordinal \#3 and \#4 replications for the LCC packet.
Change 44663 on 2002/08/07 by grayc@grayc_r400_win
describes block owners/chip level verification
Change 44636 on 2002/08/07 by mkelly@fl_mkelly_r400_win_laptop
More JSS coverage...
Change 44537 on 2002/08/06 by gregs@gregs r400 win marlboro
spread spectrum
Change 44519 on 2002/08/06 by jacarey@fl_jcarey2
1. Document oper=gmcdecode in instruction table
2. Add 4 gprs to the micro engine
Change 44512 on 2002/08/06 by mkelly@fl mkelly r400 win laptop
```

```
Textured pixel shader anti-aliased line example with VFD support.
Change 44469 on 2002/08/06 by jacarey@fl_jcarey2
Updated Interface from SQ for Events...4-bit event ID.
CP can ignore events that it does nothing for...
Change 44458 on 2002/08/06 by ashishs@fl ashishs r400 win
update
Change 44454 on 2002/08/06 by jasif@jasif_r400_win_tor
Updated.
Change 44416 on 2002/08/06 by tho@tho_r400\_win
updated
Change 44406 on 2002/08/06 by vliu@vliu r400 cnvliu100 win cvd
Update
Change 44397 on 2002/08/06 by chwang@chwang doc r400 win cvd
Update.
Change 44375 on 2002/08/06 by jacarey@fl_jcarey2
Update for oper=gmcdecode
Change 44372 on 2002/08/06 by efong@efong_r400_win_tor_doc
Updated
Change 44358 on 2002/08/06 by imuskatb@imuskatb r400 win cnimuskatb
   Updated emulator to new crtc Block file
   Updated Picasso to new register names
   Updated Display Manager to handle TMDS stream
   Completed Tmds stream library
  Added one tmds test for M2
Change 44282 on 2002/08/05 by scroce@scroce_r400_win_marlboro
Update setup document
```

```
Change 44272 on 2002/08/05 by scroce@scroce_r400_win_marlboro
Some added info for the setup document
Change 44228 on 2002/08/05 by csampayo@fl csampayo r400
Added section 1.8
Change 44211 on 2002/08/05 by jacarey@fl jcarey2
Update CP_STAT register and clarified that the CP_RBBM_rt_busy signal is not active if
the RTEE is just performing polling operations.
Change 44192 on 2002/08/05 by wlawless@wlawless
new sample mask diagram
Change 44179 on 2002/08/05 by jacarey@fl jcarey2
More Updates for Timing.
Change 44178 on 2002/08/05 by jcox@jcox r400 win orlando
added web macro
Change 44176 on 2002/08/05 by jacarey@fl_jcarey2
Shallow FIFOs Added Between PFP and Micro Engine for Timing..
Change 44096 on 2002/08/02 by mkelly@fl_mkelly_r400_win_laptop
* Implement vertex kill in the VFD for vertex buffer and constant
* Create a new class called PRIMITIVE AA for AA dump file analysis
* Update tracker / test list
Change 44081 on 2002/08/02 by efong@efong_r400_win_tor_doc
updated
Change 44071 on 2002/08/02 by jayw@MA_JAYW
pre vacation check in.
Change 44063 on 2002/08/02 by mkelly@fl_mkelly_r400_win_laptop
Simple Poly offset check, needs SC fix to work...
Change 44053 on 2002/08/02 by jacarey@fl jcarey2
```

Update 2D Spec for SRC_X pointer for small_text and host_data_blt Most of microcode for Hostdata_Blt* packets... Bitblt packets share subroutine with hostdata_blt packets... Change 44048 on 2002/08/02 by $gregs@gregs_r400_win_marlboro$ <updates> Change 44021 on 2002/08/02 by llefebvr@llefebvre laptop r400 New parameter generation scheme included in the spec. Change 43966 on 2002/08/02 by mkelly@fl_mkelly_r400_win_laptop Run line and point prims through JSS and MSAA... Change 43913 on 2002/08/02 by jacarey@fl jcarey2 Added oper=SIGNEXT for Micro Engine. Change 43841 on 2002/08/01 by mzhu@mzhu r400 win tor Update alpha fill pattern Change 43815 on 2002/08/01 by mzhu@mzhu_r400_win_tor Update LUT INC, add UPDATE TAKEN Change 43814 on 2002/08/01 by scamlin@scamlin_crayola_win orlando updates Change 43779 on 2002/08/01 by jacarey@fl jcarey2 Update bit widths of texture constants that are written for Small Text and HostData Blt* packets. Change 43775 on 2002/08/01 by mkelly@fl mkelly r400 win laptop Bresenham Control, converted R200 test... Change 43773 on 2002/08/01 by jacarey@fl_jcarey2 Added Soft Reset control for the ROM block.

Change 43751 on 2002/08/01 by frivas@FL FRivas

```
Update to HOS tests. Added complex model tests to tracker.
Change 43728 on 2002/08/01 by vgoel@fl_vgoel2
modified tracker to update hos status
Change 43710 on 2002/08/01 by mzhu@mzhu r400 win tor
Update for color cursor mode 2, LUT BLACK OFFSET/LUT WHITE OFFSET and LUT INC
implementation
Change 43706 on 2002/08/01 by csampayo@fl_csampayo_r400
Update
Change 43699 on 2002/08/01 by frivas@FL FRivas
Added two HOS tests for precision.
Change 43687 on 2002/08/01 by ashishs@fl_ashishs_r400\_win
update
Change 43685 on 2002/08/01 by rbagley@rbagley_ltxp
R400 Shader Programming Model
Checking in Laurent's revision of sequencer related updates. Also added initial
specification of two language levels; this is out of date; updates in progress.
Change 43638 on 2002/08/01 by mkelly@fl_mkelly_r400_win_laptop
JSS 3x4 simple triangle
Change 43631 on 2002/08/01 by jacarey@fl jcarey2
Update pseudocode for the ME INIT packet.
Change 43571 on 2002/07/31 by csampayo@fl csampayo r400
Updates
Change 43543 on 2002/07/31 by gregs@gregs_r400_win_marlboro
<added IO_DC_xtalin signal>
Change 43509 on 2002/07/31 by jacarey@fl_jcarey2
```

Documentation Updates:

- 1. Viz Query
- 2. Memory Size Updates
- 3. Jump Address Added to Micro Instruction Format

Change 43496 on 2002/07/31 by rherrick@ma rherrick crayola

Implement absolute register directives for INFINITE control over specifying register offset values.

Change 43493 on 2002/07/31 by mkelly@fl_mkelly_r400_win_laptop

Testing lots of SC features with stipple enabled...

Change 43483 on 2002/07/31 by peterp@MA_PETE_LT

Corrected excel cell definition used by "Top" from "SQ" tab to remove !REF error. Changed utilization factor to 70%.

Change 43423 on 2002/07/31 by jhoule@MA_JHOULE

Renamed ${\tt TX_COORD_NORM}$ to a more accurate ${\tt TX_COORD_DENORM}$, keeping values intact, but sense more consistent.

Change 43417 on 2002/07/31 by frising@ma_frising

0.98 check-in

Change 43325 on 2002/07/31 by jacarey@fl_jcarey2

Add16 and Sub16 instructions sign-extend bit 13 (Used for 2D) Min/Max and SCOMP assume that sign bit is bit 13 (Used for 2D)

Change 43240 on 2002/07/30 by semara@semara_r400_win_tor

add the smooth scrolling for the gfx

Change 43229 on 2002/07/30 by mkelly@fl_mkelly_r400_win_laptop

Line stipple variations...

Change 43220 on 2002/07/30 by jacarey@fl_jcarey2

Update Which Booleans are Set for 2D Packets with Source Update Pitch = Pixels/32 in SRC/DST_PITCH_OFFSET values.

Change 43105 on 2002/07/30 by frivas@FL FRivas

Update to HOS auto indexing tests. Change 43095 on 2002/07/30 by smoss@smoss_crayola_win SU tests Change 43084 on 2002/07/30 by kcorrell@kcorrell r400 docs marlboro updated area estimate for MH Change 43077 on 2002/07/30 by efong@efong_r400_win_tor_doc Updated Change 43005 on 2002/07/29 by hartogs@fl_hartogs Updated register addresses. Change 42958 on 2002/07/29 by imuskatb@imuskatb r400 win cnimuskatb Updated dc crtc interface Added some more M2 test to CRTC Change 42949 on 2002/07/29 by mkelly@fl_mkelly_r400_win_laptop 128 packets, one triangle per packet, each hitting a subsample in one JSS pixel. For each JSS_SAMPLE_SEL, each of 16 JSS pixels are tested. JSS SAMPLE SEL is cycled from from 0 to 8. This test ensures the tested ${\tt JSS_SAMPLE_SEL}$ is a unique value when compared to all non-tested JSS_SAMPLE_SELs. Change 42844 on 2002/07/29 by efong@efong r400 win tor doc updated Change 42788 on 2002/07/26 by csampayo@fl csampayo r400 1. Added 2 new SU tests 2. Updated test list and tracker, accordingly Change 42781 on 2002/07/26 by fhsien@fhsien_r400_win_marlboro Update Depth tests

Change 42737 on 2002/07/26 by scroce@scroce r400 win marlboro

Forgot to update TOC

```
Change 42735 on 2002/07/26 by scroce@scroce_r400_win_marlboro
Updating a bit to reflect changes in the release procedure and environment.
Change 42725 on 2002/07/26 by jasif@jasif r400 win tor
Updated after Testlist review meeting.
Change 42718 on 2002/07/26 by semara@semara r400 win tor
fix the index
Change 42654 on 2002/07/26 by jasif@jasif_r400_win_tor
Updated.
Change 42652 on 2002/07/26 by semara@semara_r400_win_tor
edit section 11 in the test plan
edit section 4 in the display interface
Change 42596 on 2002/07/26 by rbell@rbell crayola win cvd
test list for ms2
Change 42530 on 2002/07/25 by ashishs@fl_ashishs_r400_win
CL TESTS: testing guard band clipping of edgeflags.
Change 42514 on 2002/07/25 by dougd@doug
updated area for SQ based on synthesis results
Change 42504 on 2002/07/25 by jasif@jasif r400 win tor
Finished graphics section.
Change 42499 on 2002/07/25 by mkelly@fl_mkelly_r400_win_laptop
Basic MSAA functionality tests...
Change 42442 on 2002/07/25 by gabarca@gabarca_crayola_win_cvd
improved description of LUT and fixed test case
Change 42367 on 2002/07/25 by mzhu@mzhu r400 win tor
Update DCP tests ms2.xls from Richard
```

```
Change 42362 on 2002/07/25 by mzhu@mzhu_r400_win_tor
Update graphics and overlay alpha blending
Change 42269 on 2002/07/24 by jasif@jasif r400 win tor
Fininshed hdp section and revised text section.
Change 42258 on 2002/07/24 by semara@semara r400 win tor
adding section 7, 8, and 9
Change 42234 on 2002/07/24 by mkelly@fl_mkelly_r400_win_laptop
* Update to JSS tests
* New MSAA test verifying all 8 subsamples in basic hit tests
* Update tracker
* Update SC test list
Change 42233 on 2002/07/24 by nluu@nluu r400 doclib cnnb
- update specs for fast client protocol
Change 42140 on 2002/07/24 by imuskatb@imuskatb r400 win cnimuskatb
   updated crtc.cpp to consider h_sync_start
   fixed crtc test.cpp
   wrap around conter test in picasso
   updated test list
Change 42100 on 2002/07/23 by frising@ma frising
v.1.44
-It just occurred to me that having just one bit is insufficient for this. You really
need 3 (one each for x,y,z), otherwise you'd get the wrong results if, for example, the
user set WRAP S to CLAMP and WRAP T to CLAMP TO BORDER. I don't want to use three
bits, so I've reworked things. The bit is now called NEAREST_CLAMP_POLICY and has the
following behavior when nearest filtering:
Wrap/Repeat -> Wrap/Repeat
Mirror -> Mirror
Clamp to last texel -> Clamp to last texel
MirrorOnce to last texel -> MirrorOnce to last texel
Clamp half way to border color -> Clamp to last texel
MirrorOnce half way to border color -> MirrorOnce to last texel
Clamp to border color -> Clamp to border color
MirrorOnce to border color -> MirrorOnce to border color
```

```
This should allow D3D and OGL to set this bit 'once' and forget about it.
Change 42086 on 2002/07/23 by ashishs@fl_ashishs_r400_win
update
Change 42033 on 2002/07/23 by mkelly@fl_mkelly_r400_win_laptop
Update and corrected schedule test count versus sheet 1 counts.
Change 42000 on 2002/07/23 by gabarca@gabarca crayola win cvd
added the VGA_CURSOR_BLINK_INVERT register
Change 41983 on 2002/07/23 by smoss@smoss crayola win
SU tests
Change 41973 on 2002/07/23 by jasif@jasif_r400_win_tor
Finished text mode testlist.
Change 41971 on 2002/07/23 by frising@ma frising
v.1.43
-Add NEAREST_NO_BORDER bit to texture constant which controls if nearest filtering will
every sample border color/texel. When this bit is asserted the mapping for the
clamping policy when nearest filtering should be:
Wrap/Repeat -> Wrap/Repeat
Mirror -> Mirror
Clamp to last texel -> Clamp to last texel
MirrorOnce to last texel -> MirrorOnce to last texel
Clamp half way to border color -> Clamp to last texel
MirrorOnce half way to border color -> MirrorOnce to last texel
Clamp to border color -> Clamp to last texel
MirrorOnce to border color -> MirrorOnce to last texel
Change 41921 on 2002/07/23 by subad@MA SUBA
updated area. Area decreased by re-structuring tx_fmt, oned and tiled muxes
Change 41905 on 2002/07/23 by ashishs@fl_ashishs_r400_win
update
Change 41898 on 2002/07/23 by smoss@smoss_crayola_win
```

```
shortened tests
Change 41883 on 2002/07/22 by gabarca@gabarca_crayola_win_cvd
Updated as per Joveria's test leist and last meetings
Change 41881 on 2002/07/22 by csampayo@fl csampayo r400
1. Added 2-D primitives to VGT section
2. Various format updates
Change 41867 on 2002/07/22 by gabarca@gabarca_crayola_win_cvd
updated
Change 41862 on 2002/07/22 by jasif@jasif r400 win tor
Updated.
Change 41822 on 2002/07/22 by mkelly@fl_mkelly_r400\_win_laptop
* Basic JSS functional coverage
* Update test list
* Update tracker
* Added Plan vs. Actual graph to tracker sheet "schedule"
Change 41808 on 2002/07/22 by jasif@jasif_r400_win_tor
Updated.
Change 41784 on 2002/07/22 by gregs@gregs_r400_win_marlboro
<registers update>
Change 41781 on 2002/07/22 by frivas@FL FRivas
Update. Changed name of a VGT HOS test to be completed.
Change 41778 on 2002/07/22 by vliu@vliu r400 cnvliu100 win cvd
Update
Change 41774 on 2002/07/22 by imuskatb@imuskatb_r400_win_cnimuskatb
```

Change 41756 on 2002/07/22 by chwang@chwang_doc_r400_win_cvd

Updated

```
Update.
Change 41743 on 2002/07/22 by tho@tho_r400_win
updated
Change 41742 on 2002/07/22 by tien@ma spinach
updated TP/TC area estimates
Change 41731 on 2002/07/22 by efong@efong_r400_win_tor_doc
Updated
Change 41730 on 2002/07/22 by mkelly@fl_mkelly_r400_win_laptop
Improve test description and conveyance of test purpose in the image
Change 41729 on 2002/07/22 by efong@efong_r400_win_tor_doc
Updated
Change 41720 on 2002/07/22 by rbell@rbell crayola win cvd
updated
Change 41717 on 2002/07/22 by georgev@ma_georgev
First revision from verification spec.
Change 41663 on 2002/07/19 by jacarey@fl_jcarey2
Fix Number of Bits Needed in the Brush, Palette, and Immed Base
Pointers.
Change 41654 on 2002/07/19 by gabarca@gabarca_crayola_win_cvd
updated
Change 41643 on 2002/07/19 by jasif@jasif_r400_win_tor
Updated.
Change 41620 on 2002/07/19 by mkelly@fl_mkelly_r400_win_laptop
1. Re-wrote JSS test to match latest SC spec.
      2. Update test_list
```

3. Update tracker

```
Change 41600 on 2002/07/19 by llefebvr@llefebvre_laptop_r400
SQ backup.
Change 41597 on 2002/07/19 by jhoule@MA JHOULE
Pre-SIGGRAPH submit (since it's exclusive open)
Change 41582 on 2002/07/19 by dclifton@dclifton r400
Added description of rectangle primitive output. Updated state register description.
Change 41550 on 2002/07/19 by smoss@smoss_crayola_win
new x,y dim
Change 41531 on 2002/07/19 by bryans@bryans crayola doc
Update
Change 41524 on 2002/07/19 by bryans@bryans crayola doc
Minor changes to doc
Change 41450 on 2002/07/19 by jacarey@fl_jcarey2
Correct typo in diagram for write confirmation logic.
Change 41447 on 2002/07/19 by jacarey@fl_jcarey2
Write Confirmation Counter for CP/SC data coherency.
Change 41401 on 2002/07/18 by csampayo@fl csampayo r400
1. Added 4 new SU edgeflag tests
2. Updated framebuffer size for 2 tests
3. Updated test_list and test tracker accordingly
Change 41388 on 2002/07/18 by gabarca@gabarca_crayola_win_cvd
linked the test list excel into the "regression test table" icon at the end of the
document
Change 41374 on 2002/07/18 by gabarca@gabarca crayola win cvd
```

moved to the blocks/VGA directory

```
Change 41371 on 2002/07/18 by gabarca@gabarca_crayola_win_cvd
moved to the design/block/VGA directory
Change 41353 on 2002/07/18 by gabarca@gabarca crayola win cvd
updated
Change 41352 on 2002/07/18 by jasif@jasif r400 win tor
Format change only.
Change 41332 on 2002/07/18 by jacarey@fl_jcarey2
Update Brush Address Range
Change 41330 on 2002/07/18 by jacarey@fl_jcarey2
Updates
Change 41321 on 2002/07/18 by jacarey@fl jcarey2
Data written to Immd Write Confirm address generates a write confirmation.
Change 41308 on 2002/07/18 by bryans@bryans crayola doc
Update...
Change 41298 on 2002/07/18 by mzhu@mzhu_r400_win_tor
update for 2nd milestone part
Change 41296 on 2002/07/18 by gregs@gregs_r400\_win\_marlboro
<fixing previous mistake>
Change 41293 on 2002/07/18 by georgev@ma georgev
Updated for new tests.
Change 41287 on 2002/07/18 by gabarca@gabarca_crayola_win_cvd
updated
Change 41275 on 2002/07/18 by bryans@bryans_crayola_doc
Document that explains the new Chip Init library (usage and organization)
```

```
Change 41267 on 2002/07/18 by jacarey@fl jcarey2
Clarification to LCC packet on preservation/setting of valid flag.
Change 41260 on 2002/07/18 by jacarey@fl jcarey2
Update pseudocode for the issuance of event initiators to the scan converter for write
confirm.
Change 41257 on 2002/07/18 by jayw@MA JAYW
Thursday morning, minor updates
Change 41255 on 2002/07/18 by jasif@jasif_r400_win_tor
Updated.
Change 41225 on 2002/07/18 by jacarey@fl jcarey2
Revert Last Change
Change 41213 on 2002/07/18 by jacarey@fl jcarey2
1. Update LCC and Constant_Prefetch Packet formats
2. Constant write enables cleared for incremental update of constants.
Change 41208 on 2002/07/18 by fliljero@fl_frank
\verb"updated Load_Constant_Context write to BUFFER_BASE to match latest spec"
Change 41183 on 2002/07/17 by csampayo@fl_csampayo_r400
1. Added 2 new tests to SU
2. Updated SU test list
3. Updated test tracker accordingly
Change 41155 on 2002/07/17 by jacarey@fl jcarey2
Updates for interpreting the 2D constants in the GMC.
Change 41148 on 2002/07/17 by jacarey@fl_jcarey2
Describe how the 2D Default Values are Applied by the CP.
Change 41112 on 2002/07/17 by smoss@smoss crayola win
```

SU Tests

Change 41107 on 2002/07/17 by jacarey@fl_jcarey2

- 1. Update Bit Width for Brush Address to HW support Logic
- 2. Revise 2D Default Registers

Change 41083 on 2002/07/17 by ashishs@fl_ashishs_r400_win

update

Change 41075 on 2002/07/17 by jowang@jowang R400 win

more complete test plan

Change 41032 on 2002/07/17 by jayw@MA_JAYW

adding tile doc and minor depth address correction.

Change 40985 on 2002/07/17 by rbell@rbell_crayola_win_cvd

initial release

Change 40978 on 2002/07/17 by gabarca@gabarca crayola win cvd

updated new fields

Change 40950 on 2002/07/16 by csampayo@fl_csampayo_r400

- 1. Added 2 new tests to SU
- 2. Updated test_list and test tracker

Change 40947 on 2002/07/16 by $imuskatb@imuskatb_r400_win_cnimuskatb$

Updated test list for M2

Change 40929 on 2002/07/16 by $jacarey@fl_jcarey2$

Update text for 2D/3D transition determination.

Change 40885 on 2002/07/16 by $jayw@MA_JAYW$

fixed error in tile address

Change 40881 on 2002/07/16 by mpersaud@mpersaud_r400_win_tor

Simplified write acknowledge return interface between dccif and client.

Change 40873 on 2002/07/16 by smoss@smoss_crayola_win

```
update
Change 40854 on 2002/07/16 by fhsien@fhsien_r400\_win\_marlboro
Update for Z tests
Change 40782 on 2002/07/15 by efong@efong r400 win tor doc
Updated with M2 tests
Change 40771 on 2002/07/15 by csampayo@fl_csampayo_r400
1. Added SU test to validate provoking vertex
2. Updated SU's test_list accordingly
3. Updated the VGT test r400vgt_provoking_vtx_all_01
4. Updated test tracker with status for the test: r400su provoking vtx rectangle 01
Change 40710 on 2002/07/15 by jayw@MA JAYW
finished start of depth tile address calc
Change 40698 on 2002/07/15 by jacarey@fl jcarey2
Update to ME_INIT for Header Dump Function
Change 40697 on 2002/07/15 by jasif@jasif_r400_win_tor
Updated.
Change 40693 on 2002/07/15 by tho@tho_r400_win
updated
Change 40691 on 2002/07/15 by llefebvr@llefebvre laptop r400
New sequencer spec.
Change 40666 on 2002/07/15 by jacarey@fl_jcarey2
Header Dump Can Be Used for Real-Time Streams
Change 40660 on 2002/07/15 by jacarey@fl_jcarey2
Update Header Dump Base Address Size
Change 40647 on 2002/07/15 by jasif@jasif r400 win tor
M2 VGA testlist.
```

```
Change 40632 on 2002/07/15 by jacarey@fl_jcarey2
Added a couple paragraphs to describe the Brush Decode support logic for the ME.
Change 40630 on 2002/07/15 by jacarey@fl_jcarey2
Added Local Addresses for Brush Decode Hardware
Change 40609 on 2002/07/15 by jasif@jasif r400 win tor
Updated.
Change 40605 on 2002/07/15 by rbell@rbell_crayola_win_cvd
updated
Change 40600 on 2002/07/15 by jayw@MA JAYW
Monday morning release.
start of cam and non-cam tags and
address generation
Change 40599 on 2002/07/15 by chwang@chwang_doc_r400_win_cvd
Update.
Change 40595 on 2002/07/15 by rbell@rbell crayola win cvd
updated after test plan review
Change 40592 on 2002/07/15 by imuskatb@imuskatb_r400\_win\_cnimuskatb
Updated
Change 40589 on 2002/07/15 by tho@tho_r400_win
updated
Change 40582 on 2002/07/15 by tho@tho_r400_win
update
Change 40574 on 2002/07/15 by efong@efong_r400_win_tor_doc
Updated
Change 40571 on 2002/07/15 by nluu@nluu r400 doclib cnnb
```

```
- update
Change 40564 on 2002/07/15 by jacarey@fl_jcarey2
Updated Draw Indx
Change 40535 on 2002/07/15 by jacarey@fl_jcarey2
ME INIT side affect: Invalidates "valid flags" in the PFP.
Change 40473 on 2002/07/14 by vliu@vliu_r400_cnvliu100_win_cvd
Added conditional_write(...) function.
Change 40132 on 2002/07/12 by gabarca@gabarca crayola win cvd
updated
Change 40121 on 2002/07/12 by jayw@MA_JAYW
Friday night checkin with template
Change 40120 on 2002/07/12 by fhsien@fhsien_r400_win_marlboro
Update for Z_functions
Change 40039 on 2002/07/12 by efong@efong r400 win tor doc
Updated for VCD and FSDB and VPD support
Change 39993 on 2002/07/12 by frising@ma frising
v.1.42
-allow TP to use FORMAT\_COMP\_* and related number format info for multisample fetches.
Typically, the driver will want to make sure COLOR_FORMAT_OUT is consistent with these.
Change 39979 on 2002/07/12 by rbell@rbell_crayola_win_cvd
Secondary surface address test
Change 39977 on 2002/07/12 by rbell@rbell_crayola_win_cvd
updated for more milestone 2 and 3 tests
Change 39969 on 2002/07/12 by mzhu@mzhu r400 win tor
Update test plan for 2nd milestone
```

```
Change 39915 on 2002/07/12 by mkelly@fl_mkelly_r400_win_laptop
Update CL status
Change 39912 on 2002/07/12 by lkang@lkang r400 win tor
update
Change 39862 on 2002/07/11 by gabarca@gabarca crayola win cvd
Change 39847 on 2002/07/11 by csampayo@fl_csampayo_lt_r400
Updated VGT section categories
Change 39830 on 2002/07/11 by csampayo@fl csampayo lt r400
Updated the HOS Primitive Tessellation sub-section of the VGT section
Change 39819 on 2002/07/11 by frising@ma frising
v.1.41
-multisample fetch basically done (note a few unused fields had to be moved in the tex
-updated note on how degamma'd textures are stored in L2 (always 16 bit urf)
Change 39812 on 2002/07/11 by jacarey@fl_jcarey2
Real-Time Micro Engine does not have the direct write-back path as the Non-RT micro
engine.
Change 39809 on 2002/07/11 by jacarey@fl jcarey2
1. Boolean BO is set for trans bitblt packet
2. ME INIT
    - Fixed typo of for vertex shader base size
     - Added note that pixel shader base must be greater than vertex
      shader base address.
3. Added notes to set BO boolean for some of the new 2D packets.
Change 39764 on 2002/07/11 by georgev@ma_georgev
Fixed registers.
Change 39759 on 2002/07/11 by imuskatb@imuskatb_r400_win_cnimuskatb
```

Updated v1.2 Change 39739 on 2002/07/11 by $mkelly@fl_mkelly_r400_win_laptop$ Update showing priorities for Friday's meeting... Change 39700 on 2002/07/11 by jacarey@fl jcarey2 Fix Typos in Instr Prefetch and Set State Packets Change 39679 on 2002/07/11 by jayw@MA_JAYW 0.1 rev mark Change 39678 on 2002/07/11 by jayw@MA_JAYW thursday update Change 39662 on 2002/07/11 by rbell@rbell_crayola_win_cvd updated schedule Change 39637 on 2002/07/11 by smoss@smoss crayola win account for differences in tests written and schedule Change 39578 on 2002/07/10 by jacarey@fl_jcarey2 Miscellaneous Change 39572 on 2002/07/10 by jimmylau@jimmylau_r400_win_tor Update sections 5.6 and 5.7 after test plan review, to add more end cases and more detailed explanation to each test cases. Change 39571 on 2002/07/10 by jacarey@fl jcarey2 Clarifications for ALU and Texture write enables for LCC and Set Constant packets. Change 39567 on 2002/07/10 by jacarey@fl_jcarey2 Miscellanesous Corrections for 2D Packets Change 39565 on 2002/07/10 by csampayo@fl csampayo r400

Minor textual updates

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Change 39563 on 2002/07/10 by csampayo@fl_csampayo_r400
Modified Provoking Vertex sub-section to include provoking vertex and edge flags
Change 39552 on 2002/07/10 by csampayo@fl csampayo r400
Added Rectangle List Processing sub-section to the SU section
Change 39486 on 2002/07/10 by khabbari@khabbari r400 win
line buffer test plan for phase 2 released
Change 39399 on 2002/07/10 by jimmylau@jimmylau r400 win tor
Add section 10.4 in CRTC architecture and implementation specs, for double buffered
Add sections 5.6 to 5.8 in CRTC testplan, for overscan, interlaced timing mode and
double buffered registers.
Change 39359 on 2002/07/10 by rbell@rbell_crayola_win_cvd
Updated for Kscope
Change 39350 on 2002/07/10 by rbell@rbell_crayola_win_cvd
Changed name of doc
Change 39347 on 2002/07/10 by smoss@smoss crayola win
SU tests
Change 39346 on 2002/07/10 by rbell@rbell crayola win cvd
Updated file capture format, added optional macro signal capture
Change 39331 on 2002/07/10 by smoss@smoss crayola win
SU Tests
Change 39273 on 2002/07/09 by jacarey@fl_jcarey_desktop
Context is on data bits 12:10 !!!
Change 39245 on 2002/07/09 by jacarey@fl_jcarey_desktop
Micro Engine Updates
Change 39237 on 2002/07/09 by jacarey@fl jcarey desktop
```

- 1. Direct write path from micro engine behavior
- 2. Adjusted address of immd_swap in local address

Change 39220 on 2002/07/09 by csampayo@fl csampayo r400

- 1. Added 1 test to SU suite
- 2. Updated test_list accordingly
- 3. Updated relevant status on the test tracker

Change 39124 on 2002/07/09 by ygiang@ygiang_r400_win_marlboro_p4

added: shader test for debug

Change 39088 on 2002/07/09 by rbell@rbell_crayola_win_cvd

Updated status for LUT Host RW

Change 39078 on 2002/07/09 by csampayo@fl csampayo r400

Updated status for the following tests: r400vgt_edgeflags_triangle_fan_01 r400vgt_edgeflags_triangle_wflags_01 r400vgt_edgeflags_triangle_strip_01 r400vgt_edgeflags_triangle_list_01 r400vgt_edgeflags_quad_strip_01 r400vgt_edgeflags_quad_list_01 r400vgt_edgeflags_polygon_01

Change 39062 on 2002/07/09 by $mkelly@fl_mkelly_r400_win_laptop$

VFD Edge flag support for Constant to EX1 operation with example test.

Change 39045 on 2002/07/09 by jayw@MA_JAYW

no change

Change 39016 on 2002/07/09 by mpersaud@mpersaud_r400_win_tor

Updated revision number

Change 39015 on 2002/07/09 by mpersaud@mpersaud r400 win tor

Tie off ICON_DCCARB_rswap & CURSOR_DCCARB_rswap to zero in DCCARB as it is not generated by either block

Change 39004 on 2002/07/09 by bryans@bryans_crayola_doc

There are 2 copies in the depot of this document: This one (version 4.2) is out of date. The most up to date one (version 4.4) resides in doc_lib/testenv. I left that copy there since it applies to both emulation and simulation.

Change 39003 on 2002/07/09 by bryans@bryans crayola doc

Updated as per status meeting

Change 38911 on 2002/07/08 by jacarey@fl jcarey desktop

- 1. Remove Set_Cf_Constant Packet
- 2. Added code for new Set_Constant packet
- 3. Preparations for writing constants to external memory

Change 38829 on 2002/07/08 by lseiler@lseiler_r400_win_marlboro

RB Arch spec: modified export buffer depth storage, added explanations

Change 38815 on 2002/07/08 by tho@tho r400 win

updated

Change 38813 on 2002/07/08 by mmantor@mmantor r400 win

assigned quad id to the lod correct term

Change 38785 on 2002/07/08 by csampayo@fl_csampayo_r400

Added status for the following SU tests: r400su_provoking_vtx_point_01 r400su_provoking_vtx_line_01 r400su_provoking_vtx_triangle_01

Change 38743 on 2002/07/08 by mzhu@mzhu_r400_win_tor

Update for double buffer register

Change 38735 on 2002/07/08 by imuskatb@imuskatb_r400_win_cnimuskatb

updated (1st draft) of Dispout Test plan

Change 38722 on 2002/07/08 by rbell@rbell_crayola_win_cvd

updated test list after test plan review

Change 38697 on 2002/07/08 by imuskatb@imuskatb r400 win cnimuskatb

Updated

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Change 38670 on 2002/07/08 by chwang@chwang_doc_r400_win_cvd
Update.
Change 38661 on 2002/07/08 by efong@efong_r400_win_tor_doc
Updated
Change 38658 on 2002/07/08 by jasif@jasif r400 win tor
Updated.
Change 38654 on 2002/07/08 by nluu@nluu_r400_doclib_cnnb
- update
Change 38652 on 2002/07/08 by tho@tho r400 win
updated
Change 38648 on 2002/07/08 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 38643 on 2002/07/08 by imuskatb@imuskatb_r400_win_cnimuskatb
   Updated files for TMDS
  Added new CMDKeys for DAC
Change 38642 on 2002/07/08 by efong@efong_r400_win_tor_doc
updated
Change 38618 on 2002/07/08 by rbell@rbell crayola win cvd
updated
Change 38421 on 2002/07/05 by gabarca@gabarca crayola win cvd
updated open items
Change 38412 on 2002/07/05 by nbarbier@nbarbier_r400_win_tor
Updated TMDS test descriptions
Change 38392 on 2002/07/05 by csampayo@fl_csampayo_lt_r400
```

Added Edge Flag Processing and Provoking Vertex Processing sub-sections (in the SU Section). Updated format of complete SU Section.

Change 38371 on 2002/07/05 by csampayo@fl_csampayo_lt_r400

1. Added edge flag and provoking vertex sections to SU Polygon Mode 2. Moved r400su edge flag 01 to appropriate section

Change 38348 on 2002/07/05 by gabarca@gabarca crayola win cvd

updated as pre meeting July 3

Change 38347 on 2002/07/05 by mkelly@fl mkelly r400 win laptop

VFD edge flag support and example, note: waiting on bug fix in ccgen.cpp to be checked in.

Change 38344 on 2002/07/05 by gregs@gregs_r400_win_marlboro

<added indirect access to ROM memory

Change 38339 on 2002/07/05 by subad@MA SUBA

updated area of tcd. Area increased by 2 sq.mm. bcos the correct area estimate of degamma logic was entered. Originally an estimate was entered.

Change 38338 on 2002/07/05 by jasif@jasif_r400_win_tor

Updated.

Change 38312 on 2002/07/05 by $jacarey@fl_jcarey2$

Clears 2D Flag when writing to the CONTEXT ALLOCATION FLAGS

Change 38294 on 2002/07/05 by $jacarey@fl_jcarey2$

New Addresses for Setting the Context Allocation Flags and the associated 2D flag.

Change 38285 on 2002/07/05 by $jacarey@fl_jcarey2$

Updates to ME_INIT

- 1. Instruction Thresholds need to be programmed for $\ensuremath{\mathsf{Real-Time}}$
- 2. Side affects that occur when re-programming ${\tt MAX_CONTEXT}$

Change 38275 on 2002/07/05 by tho@tho_r400_win

-updated test document

-updated model document Change 38271 on 2002/07/05 by rbell@rbell_crayola_win_cvd Added auto fill tests Change 38257 on 2002/07/05 by bryans@bryans crayola doc Add legacy version of display format (this needs to be updated) Change 38254 on 2002/07/05 by bryans@bryans_crayola_doc Update with misc. tasks Change 38126 on 2002/07/04 by rbell@rbell_crayola_win_cvd Added autofill test Change 38125 on 2002/07/04 by mzhu@mzhu r400 win tor Update for double buffer register Change 38097 on 2002/07/04 by lkang@lkang_r400_win_tor update Change 38095 on 2002/07/04 by bryans@bryans_crayola_doc Update for July 1 week Change 38070 on 2002/07/04 by nbarbier@nbarbier_r400_win_tor Updated Milestone 2 Tests Change 37973 on 2002/07/03 by jasif@jasif_r400_win_tor Updated. Change 37951 on 2002/07/03 by llefebvr@llefebvre laptop r400 Backup Change 37950 on 2002/07/03 by jasif@jasif_r400_win_tor Updated.

Change 37926 on 2002/07/03 by jacarey@fl_jcarey2

```
Updates for Small_Text and HostData_Blt packets w.r.t. SRC_X term calculation.
Change 37925 on 2002/07/03 by mmantor@mmantor_r400_win
updated the sc sq interface definition
Change 37905 on 2002/07/03 by rbell@rbell crayola win cvd
Updated schedule, added more alpha blending tests
Change 37852 on 2002/07/03 by mkelly@fl_mkelly_r400_win_laptop
Good test for basic checks of sequence/scan conversion/shader operation...
Change 37847 on 2002/07/03 by rbell@rbell_crayola_win_cvd
Added zero expansion tests
Change 37832 on 2002/07/03 by mzhu@mzhu r400 win tor
Update for MH data return
Change 37831 on 2002/07/03 by hartogs@fl hartogs
In description of register VGT HOS MAX TESS LEVEL, changed valid discrete levels from 1
thru 15 inclusive to 1 thu 14 inclusive.
This change was actually checked in by Brian Buchner yesterday, but he did not update
the revision number or log.
Change 37798 on 2002/07/03 by imuskatb@imuskatb_r400_win_cnimuskatb
   Updated
Change 37794 on 2002/07/03 by efong@efong r400 win tor doc
updated
Change 37742 on 2002/07/02 by csampayo@fl_csampayo_r400
Updates:
1. Updated description/status for the following tests in the
                                                                tracker:
r400vgt_provoking_vtx_all_01
r400vgt_hos_cubic_pos_pnt_discrete_01
2. Sorted test_list
Change 37706 on 2002/07/02 by gabarca@gabarca crayola win cvd
Cleaned up descriptions of legacy non-standard VGA registers, added that DISP START,
```

```
BYTE PAN and ATTR_PPAN are loaded every line
Change 37705 on 2002/07/02 by tho@tho_r400_win
updated cursor test goldens
   updated milestone 2 test list
Change 37702 on 2002/07/02 by jasif@jasif_r400_win_tor
Updated.
Change 37690 on 2002/07/02 by jhoule@MA_JHOULE
Changed format to removed level skipping.
Change 37681 on 2002/07/02 by bbuchner@fl bbuchner r400 win
tessellation engine creation
Change 37677 on 2002/07/02 by bbuchner@fl_bbuchner_r400_win
updated tess level constraints
Change 37675 on 2002/07/02 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 37664 on 2002/07/02 by jacarey@fl jcarey2
Added Microcode for 2D Paint Packet
  Includes use of subroutines ... i.e. Call & Return Instructions.
Change 37642 on 2002/07/02 by jayw@MA JAYW
initial rev
Change 37613 on 2002/07/02 by frivas@FL FRivas
update to number of tests in "Schedule" sheet
Change 37607 on 2002/07/02 by gregs@gregs_r400_win_marlboro
added hardwired at the top of chip.v options (straps).
Change 37595 on 2002/07/02 by chwang@chwang_doc_r400_win_cvd
Update.
```

```
Change 37594 on 2002/07/02 by efong@efong_r400_win_tor_doc
Updated
Change 37563 on 2002/07/02 by jacarey@fl_jcarey2
Update for the arbitration in the RCIU
Change 37562 on 2002/07/02 by tho@tho r400 win
updated
Change 37557 on 2002/07/02 by jasif@jasif_r400_win_tor
Updated.
Change 37549 on 2002/07/02 by rbell@rbell_crayola_win_cvd
updated for alpha blending
Change 37536 on 2002/07/02 by jacarey@fl jcarey2
1. Update PFP Pseudocode for the case where the INDX BASE/Size are not present in the
draw_indx packet.
2. Updated algorithm for draw indx in the PM4 Spec.
Change 37534 on 2002/07/02 by jacarey@fl_jcarey2
1. Update description for LCC packet.
2. Strike through packets that were obsolete/changed as of June 15th
Change 37477 on 2002/07/01 by csampayo@fl csampayo r400
1. Updated the display size, test description and other minor test format changes
for the following tests:
   r400vgt_dma_swap_indx16_01.cpp
   r400vgt dma swap indx32 01.cpp
2. Updated the tests descriptions on the test tracker for above
3. Deleted the following test from the test tracker and adjusted \overline{\phantom{a}}
   Schedule accordingly:
   r400vgt_hos_PNQ_lp_ln_cont_13_16_texture_lighting_projection.cpp
Change 37429 on 2002/07/01 by ashishs@fl ashishs r400 win
update
```

```
Change 37376 on 2002/07/01 by mkelly@fl_mkelly_r400_win_laptop
More tests validating reference vertex delta pixel calcs for baryc interp.
Change 37217 on 2002/06/28 by lkang@lkang r400 win tor
update
Change 37199 on 2002/06/28 by gabarca@gabarca crayola win cvd
updated VGAHDP
Change 37174 on 2002/06/28 by csampayo@fl_csampayo_r400
Added the following new VGT tests and updated test tracker and test_list.
Change 37170 on 2002/06/28 by jasif@jasif_r400_win_tor
Updated.
Change 37101 on 2002/06/28 by jasif@jasif r400 win tor
Updated.
Change 36997 on 2002/06/28 by lkang@lkang r400 win tor
clock specs for bif and dc
Change 36985 on 2002/06/28 by jacarey@fl_jcarey2
Add Defaults to the Spreadsheet
Change 36895 on 2002/06/27 by mzhu@mzhu r400 win tor
Update overlay zero expansion
Change 36880 on 2002/06/27 by jasif@jasif r400 win tor
Updated status. Reorganized features into more subsections.
Change 36872 on 2002/06/27 by gabarca@gabarca_crayola_win_cvd
Completed VGAHDP spec (except performance)
Change 36862 on 2002/06/27 by frising@ma frising
Changes:
-Add INDEX ROUND field to vfetch instruction (0=round, 1=truncate to negative infinity)
```

-Make OFFSET X in vfetch instruction a signed 23-bit integer.

Change 36843 on 2002/06/27 by mpersaud@mpersaud_r400_win_tor

Updated documents to reflect actual DCCIF implementation

Change 36842 on 2002/06/27 by mpersaud@mpersaud r400 win tor

Cleared up operation of IDCT interface.

General document clean up and maintenance.

Change 36836 on 2002/06/27 by mkelly@fl mkelly r400 win laptop

Perspective-Correct barycentric coordinate interpolation simple tests verifying combos of ref v0 locations.

Change 36831 on 2002/06/27 by jayw@MA_JAYW

pre-1st triange render check in

Change 36824 on 2002/06/27 by jacarey@fl_jcarey2

Document Polarity Inversion of the Deallocation FIFO Booleans used by the Micro Engine.

Change 36802 on 2002/06/27 by mzhu@mzhu_r400_win_tor

Correct Y alpha for graphics and overlay alpha blending

Change 36792 on 2002/06/27 by tho@tho_r400_win

emu feature list added

Change 36785 on 2002/06/27 by frising@ma_frising

Another 1.40 checkpoint.

texture size.

- -declare noise texture and related functionality as being unsupported on r400.
- -adjust fetch opcodes for future growth. 0..15 = fetches, 16..23 = gets, 24..31 = sets -move height specifier in SIZE field up 3-bits to allow for future growth of max 2D
- -added DXN compressed 2 channel texture format for normals (and colors)
- -specify that number format conversion will happen for compressed texture formats (e.g. DXT/DXN)
- -make SIGNED_RF_MODEL_ALL apply to unsigned biased RF numbers. Evan pointed out that this is needed to do the *2-1 type mapping. Persumably since we have this for signed numbers this is straight forward to add.

-Until we understand what MS really wants, we are keeping our getgradients as is and

```
not adding a setgradients/texldd.
Change 36778 on 2002/06/27 by csampayo@fl_csampayo_r400
Updated status for the following VGT tests:
r400vgt_immed_index_tri_wflags_01
r400vgt immed index tri strip 01
r400vgt_immed_index_tri_list_01
r400vgt immed index tri fan 01
r400vgt_immed_index_rectangle_list_01
r400vgt_immed_index_polygon_01
r400vgt immed index quad strip 01
r400vgt_immed_index_quad_list_01
Change 36772 on 2002/06/27 by mzhu@mzhu_r400_win_tor
Correct REDD_LINE_COUNT logic for color cursor
Change 36755 on 2002/06/27 by jacarey@fl jcarey2
Add Pixel and Vertex Shader Booleans and Status Signals.
Change 36747 on 2002/06/27 by jacarey@fl jcarey2
Update Pseudocode for the POLYLINE PM4 Packet.
Change 36731 on 2002/06/27 by jacarey@fl_jcarey2
Add Vertex and Pixel Dealloc FIFO Full Signals to Boolean Register.
Change 36718 on 2002/06/27 by mkelly@fl_mkelly_r400_win_laptop
Update
Change 36697 on 2002/06/27 by jacarey@fl jcarey2
Miscellaneous Typos
Change 36614 on 2002/06/26 by csampayo@fl csampayo r400
Updated status for the following tests:
r400vgt_dma_index_quad_list_01
r400vgt_dma_index_quad_strip_01
r400vgt_dma_index_polygon_01
Change 36531 on 2002/06/26 by mzhu@mzhu r400 win tor
Add DMIF data return order
```

```
Change 36526 on 2002/06/26 by gregs@gregs_r400_win_marlboro
DRAM_select
Change 36521 on 2002/06/26 by mzhu@mzhu_r400_win_tor
Add more details for ICON and CURSOR implementation. Update LUT host read/write.
Change 36510 on 2002/06/26 by mkelly@fl mkelly r400 win laptop
Update SC plan test approach for baryc interpolation reference pixel delta calculation.
Change 36488 on 2002/06/26 by whui@whui_r400_win_tor
Test plan for R400 DCT
Change 36480 on 2002/06/26 by chwang@chwang doc r400 win cvd
Rename.
Change 36479 on 2002/06/26 by chwang@chwang doc r400 win cvd
Feature list for R400 IDCT.
Change 36476 on 2002/06/26 by rramsey@RRAMSEY_P4_r400_win
Clean up SC dumps
 Remove pa_sc.dmp since it is redundant
 Add sc_rbbm.dmp which only contains sc relevant reg writes so tb_sc runs faster
 Rearrange dump levels so only block level interfaces are dumped at level 1,
   hw accurate internals are dumped at level 2, and non-hw accurate are dumped
    at level 3
Update emu dumps block diagram to reflect changes
Change 36473 on 2002/06/26 by imuskatb@imuskatb r400 win cnimuskatb
   Updated
Change 36431 on 2002/06/26 by rherrick@ma_rherrick_crayola
Documentation for Multi-streamed RB Client interface...
Change 36394 on 2002/06/26 by jacarey@fl_jcarey2
Updates for Constant Write Enables Controlled by the LCC Packet
and not the Set_Constant packet.
```

```
Change 36302 on 2002/06/25 by csampayo@fl_csampayo_r400
Updated status for following tests:
r400vgt_dma_index_tri_list_01
r400vgt_dma_index_tri_fan_01
r400vgt_dma_index_tri_strip_01
r400vgt dma index tri wflags 01
Change 36274 on 2002/06/25 by ashishs@fl ashishs r400 win
update
Change 36258 on 2002/06/25 by lkang@lkang_r400_win_tor
updates
Change 36171 on 2002/06/25 by jowang@jowang_R400_win
added SHIFT IN BLACK and BLACK COLOR *
Change 36163 on 2002/06/25 by dclifton@dclifton r400
Identified gradients as subpixel gradients.
Change 36159 on 2002/06/25 by jacarey@fl jcarey2
Update draw_indx pseudocode.
Change 36157 on 2002/06/25 by efong@efong_r400_win_tor_doc
Updated with autoreplication and autocentering for extended is done
Change 36154 on 2002/06/25 by jacarey@fl jcarey2
Make microh to microm and mrh to mrm
Change 36145 on 2002/06/25 by csampayo@fl csampayo r400
Various updates to VGT section. Added test numbering to CL/VTE section
Change 36134 on 2002/06/25 by rfevreau@rfevreau_r400_win
Updated TMDS schedule
Change 36124 on 2002/06/25 by rbell@rbell_crayola_win_cvd
Added alpha blending tests, update schedule for this
```

```
Change 36091 on 2002/06/25 by jacarey@fl_jcarey2
Add note on management of the external memory surfaces for 2D.
Change 35994 on 2002/06/24 by csampayo@fl csampayo lt r400
Update to fix counters for some tests in the CL/VTE section
Change 35974 on 2002/06/24 by jasif@jasif r400 win tor
Updated.
Change 35961 on 2002/06/24 by csampayo@fl_csampayo_lt_r400
Updated status for the following VGT tests:
r400vgt dma engine 09
r400vgt_dma_engine_10
Change 35867 on 2002/06/24 by jacarey@fl_jcarey2
Status Spreadsheet Updated
Change 35862 on 2002/06/24 by rvelez@rvelez r400 win tor
Updated 6/24
Change 35830 on 2002/06/24 by frivas@FL_FRivas
Update. Finished HOS PNQ test.
Change 35826 on 2002/06/24 by jacarey@fl_jcarey2
Updates for Post-June15th Packet Changes
Change 35818 on 2002/06/24 by frivas@FL FRivas
update to HOS PNQ test
Change 35817 on 2002/06/24 by efong@efong_r400_win_tor_doc
Updated so that 06/22/02 done on 06/30/02
Change 35814 on 2002/06/24 by efong@efong_r400_win_tor_doc
Updated
Change 35807 on 2002/06/24 by frivas@FL FRivas
```

```
update to test counts in Schedule sheet
Change 35804 on 2002/06/24 by frivas@FL_FRivas
update to HOS PNQ test
Change 35799 on 2002/06/24 by chwang@chwang doc r400 win cvd
Update.
Change 35795 on 2002/06/24 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 35787 on 2002/06/24 by frivas@FL_FRivas
no change
Change 35784 on 2002/06/24 by tho@tho r400 win
updated
Change 35773 on 2002/06/24 by rbell@rbell_crayola_win_cvd
Added overlay matrix transform tests
Change 35769 on 2002/06/24 by ctaylor@fl_ctaylor_r400_win_marlboro
Added Baryc description to help define Shader Pipe usage for pixel interpolation.
Change 35765 on 2002/06/24 by jacarey@fl_jcarey2
Updates for Microcode Width Increase to 74 bits
Change 35762 on 2002/06/24 by rbell@rbell_crayola_win_cvd
updated
Change 35746 on 2002/06/24 by ashishs@fl ashishs r400 win
update
Change 35743 on 2002/06/24 by frivas@FL_FRivas
Update
Change 35739 on 2002/06/24 by jacarey@fl_jcarey2
```

1. Microcode RAM is single-ported Updated Sections: 6.11 7.28 7.29 7.13 7.14 Change 35732 on 2002/06/24 by mkelly@fl mkelly r400 win laptop Update Change 35641 on 2002/06/21 by ashishs@fl_ashishs_r400_win update Change 35639 on 2002/06/21 by csampayo@fl csampayo r400 Updated status for the following tests: r400vgt reuse index triangle list 02 r400vgt_reuse_index_triangle_list_03 Change 35617 on 2002/06/21 by frivas@FL_FRivas update to HOS PNT tests Change 35604 on 2002/06/21 by jasif@jasif_r400_win_tor Updated. Change 35597 on 2002/06/21 by khabbari@khabbari r400 win auto coef cal released Change 35571 on 2002/06/21 by jasif@jasif_r400_win_tor Updated. Change 35548 on 2002/06/21 by jacarey@fl_jcarey2 Add TC_RBBM_busy and add to RBBM_STATUS register Change TP_RBBM_busy to TPC_RBBM_busy Change 35546 on 2002/06/21 by jhoule@MA JHOULE

Check in for Tien to look at a bit.

```
Change 35545 on 2002/06/21 by mkelly@fl_mkelly_r400_win_laptop
Update
Change 35527 on 2002/06/21 by jacarey@fl jcarey2
Clarify Event Initiators that generate signals from SQ and RC>
Change 35517 on 2002/06/21 by jacarey@fl jcarey2
Update Documents
Change 35508 on 2002/06/21 by mkelly@fl_mkelly_r400_win_laptop
Simple CL test
Change 35501 on 2002/06/21 by rbell@rbell\_crayola\_win\_cvd
Updated some graphics tests in testplan
Added two overlay basic tests (8888 and 2101010)
Change 35494 on 2002/06/21 by jacarey@fl jcarey2
Fix Typo: T1 Constant should be T0 for Source informatoin.
Change 35352 on 2002/06/20 by jasif@jasif_r400_win_tor
Updated.
Change 35330 on 2002/06/20 by ashishs@fl_ashishs_r400_win
update
Change 35315 on 2002/06/20 by jasif@jasif r400 win tor
Updated.
Change 35282 on 2002/06/20 by jacarey@fl_jcarey2
1. Increased Depth of the Scratch Memory
2. Added Incremental_Update Boolean
3. Added Context_Dirty Boolean
Change 35264 on 2002/06/20 by fhsien@fhsien_r400_win_marlboro
Update errors
```

Change 35218 on 2002/06/20 by georgev@ma georgev

```
Added changes from Lauraunt.
Change 35199 on 2002/06/20 by jasif@jasif_r400_win_tor
Updated.
Change 35176 on 2002/06/20 by jacarey@fl_jcarey2
Document that Type-0 packets cannot be used for instruction memory
updates.
Change 35157 on 2002/06/20 by ashishs@fl_ashishs_r400_win
update
Change 35153 on 2002/06/20 by georgev@ma_georgev
Added new tests to list.
Change 35101 on 2002/06/20 by jacarey@fl jcarey2
SRC1 into shifter is only 5 bits.
Change 35097 on 2002/06/20 by jacarey@fl jcarey2
Fix Height and Width parameter sizes in packets
Change 35084 on 2002/06/19 by csampayo@fl_csampayo_r400
Updated status for the following tests:
r400vgt dma engine 01
r400vgt_dma_engine_02
r400vgt dma engine 03
r400vgt dma engine 04
r400vgt_dma_engine_05
r400vgt dma engine 06
r400vgt_dma_engine_07
r400vgt_dma_engine_08
Change 35082 on 2002/06/19 by mpersaud@mpersaud_r400_win_tor
Updated spec to be inline with actual implementation
Change 35053 on 2002/06/19 by rvelez@rvelez r400 win tor
Updated 6/19/02
```

```
Change 35048 on 2002/06/19 by lkang@lkang_r400_win_tor
updated emulation in vga, scaler, crtc, lb, & dispout.
Change 35028 on 2002/06/19 by jowang@jowang R400 win
updated
Change 35008 on 2002/06/19 by jacarey@fl jcarey2
Updates for IM_Load_Immediate Support
Change 35007 on 2002/06/19 by tho@tho_r400_win
-2x magnify cursor complete
  -color cursor complete
Change 34985 on 2002/06/19 by jacarey@fl jcarey2
1. Preparations for Context Management
2. Event Timestamp Discards Data If Event ID Does Not Match
3. Added DMA Data Source and Context Dirty local Addresses.
Change 34977 on 2002/06/19 by jacarey@fl_jcarey2
Additions to Micro Engine Address Map
1. DMA_Data_Source
2. Context Dirty Boolean
Change 34959 on 2002/06/19 by jacarey@fl_jcarey2
Update Base Addresses for Determining Incremental Updates.
Change 34953 on 2002/06/19 by mkelly@fl mkelly r400 win laptop
{\tt Update\ to\ include\ control\ of\ Z\_WRITE\_ENABLE\ and\ ZFUNC...\ awaiting\ support\ updates\ to\ RB}
emu lib...
Change 34936 on 2002/06/19 by imuskatb@imuskatb r400 win cnimuskatb
   Updated
Change 34920 on 2002/06/19 by jowang@jowang_R400_win
updated version
Change 34918 on 2002/06/19 by frising@ma frising
```

```
Another 1.40 chechpoint.
-go only with YUV replication (remove YUV interpolation)
-rough in DXN1 and DXN2 compressed normal formats
Change 34914 on 2002/06/19 by bryans@bryans_crayola_doc
Add emulate/simulate updated command line options (used for launching the emulation and
simulation from the Makefiles/perl scripts)
Change 34769 on 2002/06/18 by efong@efong r400 win tor doc
Updated ... changed overscan to be done
Change 34756 on 2002/06/18 by tho@tho_r400_win
-matrix transform and adjustment complete with debug test
   -ycbcr subsampling complete with debug test
Change 34750 on 2002/06/18 by imuskatb@imuskatb r400 win cnimuskatb
   updated
Change 34747 on 2002/06/18 by imuskatb@imuskatb r400 win cnimuskatb
   updated
Change 34731 on 2002/06/18 by bryans@bryans_crayola_doc
Update to reflect the additions in TESTINFO object:
getArchitecture()
getConfiguration()
getSimMode()
getSimType()
getTimingMode()
getTestMode()
- removed reference to Architecture object (this is retired for the new chip library)
Change 34730 on 2002/06/18 by imuskatb@imuskatb_r400_win_cnimuskatb
updated
Change 34722 on 2002/06/18 by rfevreau@rfevreau_r400_win
TMDS schedule updated
Change 34690 on 2002/06/18 by efong@efong r400 win tor doc
```

```
Updated and put in who is responsible for {\rm M2} stuff
Change 34679 on 2002/06/18 by jasif@jasif_r400_win_tor
Updated.
Change 34654 on 2002/06/18 by jacarey@fl_jcarey2
Multiplier in the Micro Engine is 14x14
Change 34629 on 2002/06/17 by jasif@jasif_r400_win_tor
Updated.
Change 34623 on 2002/06/17 by tho@tho r400 win
update
Change 34614 on 2002/06/17 by jowang@jowang_R400_win
updated horizontal filter (not complete)
Change 34608 on 2002/06/17 by snezana@snezana_crayola_win_cvd
updated
Change 34601 on 2002/06/17 by jasif@jasif r400 win tor
Updated.
Change 34591 on 2002/06/17 by rbell@rbell crayola win cvd
updated
Change 34582 on 2002/06/17 by bryans@bryans_crayola_doc
update...
Change 34571 on 2002/06/17 by paulv@MA_PVELLA
Forgot to save changes from previous submission.
Change 34567 on 2002/06/17 by paulv@MA_PVELLA
Updated MHS with latest specifications and hardware changes.
Change 34557 on 2002/06/17 by jasif@jasif r400 win tor
```

Updated. Change 34552 on 2002/06/17 by jacarey@fl_jcarey2 Remove Slow Client Protocol from the RBBM documentation. Change 34550 on 2002/06/17 by gabarca@gabarca_crayola_win_cvd updated table of vga extended registers Change 34534 on 2002/06/17 by frivas@FL FRivas Update to PNL tests Change 34530 on 2002/06/17 by ashishs@fl ashishs r400 win update Change 34527 on 2002/06/17 by frivas@FL_FRivas Update to HOS PNL test. Change 34515 on 2002/06/17 by frivas@FL FRivas Update to HOS PNT using discrete tessellation with lighting and texturing. Change 34508 on 2002/06/17 by frivas@FL FRivas Update to HOS PNT with discrete tessellation and orthographic projection. Change 34500 on 2002/06/17 by frivas@FL FRivas Update to HOS PNT test. Change 34498 on 2002/06/17 by mkelly@fl_mkelly_r400_win_laptop Test SC rectangle list vertex order interpretation... Change 34491 on 2002/06/17 by frivas@FL_FRivas Update to PNT HOS test that uses only a single PNT in wireframe mode for continuous tessellation that varies between 1.0-14. with reuse 4-16. Change 34485 on 2002/06/17 by frivas@FL FRivas

Update to HOS PNT texture and lighting test.

```
Change 34479 on 2002/06/17 by frivas@FL FRivas
Update to HOS PNT texture and lighting test
Change 34475 on 2002/06/17 by rramsey@RRAMSEY P4 r400 win
Add documentation on sc dump points
Change 34457 on 2002/06/17 by tho@tho r400 win
updated
Change 34454 on 2002/06/17 by frivas@FL_FRivas
Update to HOS PNT test with changing normals.
Change 34452 on 2002/06/17 by jasif@jasif_r400_win_tor
Updated.
Change 34443 on 2002/06/17 by chwang@chwang doc r400 win cvd
  Update
Change 34439 on 2002/06/17 by imuskatb@imuskatb r400 win cnimuskatb
updated
Change 34438 on 2002/06/17 by imuskatb@imuskatb_r400\_win\_cnimuskatb
   Updated
Change 34437 on 2002/06/17 by jacarey@fl jcarey2
Remove Constant Flag from the write requesters.
Change 34436 on 2002/06/17 by frivas@FL FRivas
Update to HOS PNT texture test
Change 34431 on 2002/06/17 by jacarey@fl_jcarey2
1. Set_Constant: Qualified incrementing coherency counter with CONST_WRITE_ENABLE.
2. Updated 2D-to-3D mode determination.
Change 34417 on 2002/06/17 by frivas@FL FRivas
Update to HOS PNT test that adjusts normals during runtime.
```

```
Change 34415 on 2002/06/17 by rbell@rbell_crayola_win_cvd
Changed to testchip.arch and testchip.conf
Change 34414 on 2002/06/17 by chwang@chwang_doc_r400_win_cvd
Update.
Change 34413 on 2002/06/17 by rbell@rbell crayola win cvd
updated
Change 34412 on 2002/06/17 by imuskatb@imuskatb_r400_win_cnimuskatb
   Disconnect Test + golden
   updated crtc emu doc
Change 34403 on 2002/06/17 by efong@efong_r400_win_tor_doc
Updated
Change 34369 on 2002/06/16 by ashishs@fl ashishs r400 win
update
Change 34294 on 2002/06/14 by jasif@jasif_r400_win_tor
Updated.
Change 34290 on 2002/06/14 by csampayo@fl_csampayo_lt_r400
Various document updates
Change 34281 on 2002/06/14 by lkang@lkang_r400_win_tor
updated scaler emulation schedule
Change 34269 on 2002/06/14 by mkelly@fl_mkelly_r400_win_laptop
Update
Change 34264 on 2002/06/14 by nbarbier@nbarbier_r400_win_tor
Updated Auto-detection section.
Change 34242 on 2002/06/14 by kcorrell@kcorrell_r400_docs_marlboro
```

```
update
Change 34221 on 2002/06/14 by efong@efong_r400_win_tor_doc
Added in new vertical replication tests
Change 34207 on 2002/06/14 by rvelez@rvelez r400 win tor
Updated 6/14
Change 34205 on 2002/06/14 by snezana@snezana_crayola_win_cvd
updated for alu inside framecntl
Change 34183 on 2002/06/14 by efong@efong_r400_win_tor_doc
{\tt Just \ strikethrough \ on \ the \ tap \ configuration}
Change 34146 on 2002/06/14 by mmantor@mmantor_r400_win
moved spec to sc directory and added a test bench document to the directory
Change 34141 on 2002/06/14 by tien@ma spinach
Updated TP and TC areas
Change 34061 on 2002/06/14 by imuskatb@imuskatb_r400_win_cnimuskatb
   Updated
Change 33916 on 2002/06/13 by jasif@jasif_r400_win_tor
Updated.
Change 33910 on 2002/06/13 by mzhu@mzhu r400 win tor
add test cases for grphics/overlay blend
Change 33835 on 2002/06/13 by mzhu@mzhu r400 win tor
add test plan for second milestone
Change 33820 on 2002/06/13 by hartogs@fl_hartogs
New revision is 0.96
Added diagram to show VGT configurations.
```

Updated Tessellation Engine fixed function table.

```
Change 33807 on 2002/06/13 by gabarca@gabarca crayola win cvd
Added in open issues add register bit to select if line compare happens in compared
line of the next
Change 33796 on 2002/06/13 by gabarca@gabarca crayola win cvd
updated open issue: readback of VGA DISP interface
Change 33794 on 2002/06/13 by gabarca@gabarca crayola win cvd
Updated open issues and legacy reg list
Change 33757 on 2002/06/13 by lkang@lkang_r400_win_tor
Incorporated emulation, netlist, & chip integration schedules
Change 33619 on 2002/06/12 by imuskatb@imuskatb r400 win cnimuskatb
   wrap around test
   updated display config to support sync a start
   vga render test V1.0 - test run only
Change 33577 on 2002/06/12 by hartogs@fl hartogs
New revision number is 0.95
Updated all register definitions to reflect new "driver friendly" address assignments.
This was architecture-wide change made on 5/15/02.
{\tt Changed~GFX\_COPY\_STATE~register~description~to~reflect~actual~hardware~implementation.}
Deleted GFX PIPE CNTL register.
Added enumerations to the VGT_EVENT_INITIATOR register.
Added section about restrictions for fields in VGT GRP PRIM TYPE register.
Removed TESS INPUT MODE field from VGT HOS CNTL register.
Changed VGT SQ interface (in agreement with Laurent Lefebvre) so that the
{\tt VGT\_SQ\_end\_of\_vtx\_vect\ and\ VGT\_SQ\_state\ signals\ are\ "don't\ care"\ if\ the}
VGT SQ continued signal is set.
Change 33532 on 2002/06/12 by frising@ma_frising
Another checkpoint. Start cleaning up usage tables.
Change 33518 on 2002/06/12 by frivas@FL FRivas
Update - Added a test to HOS PNT section. The new test implements lighting with moving
normals.
```

Change 33490 on 2002/06/12 by frivas@FL FRivas

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```
Update to HOS PNQ test.
Change 33464 on 2002/06/12 by jasif@jasif_r400_win_tor
Updated.
Change 33362 on 2002/06/11 by frising@ma frising
Post June 15 1.40 checkpoint.
Change 33349 on 2002/06/11 by ashishs@fl_ashishs_r400_win
update
Change 33339 on 2002/06/11 by frivas@FL_FRivas
Update to PNQ HOS test.
Change 33329 on 2002/06/11 by mkelly@fl_mkelly_r400_win_laptop
update, sc point tests....
Change 33299 on 2002/06/11 by jayw@MA JAYW
more FB and cache line formats
Change 33282 on 2002/06/11 by frivas@FL_FRivas
Update to HOS test for single PNT with cubic position and quadratic normal using
continuous tessellation.
Change 33275 on 2002/06/11 by tho@tho_r400_win
updated, matrix transform and adjustment emulation block completed
Change 33219 on 2002/06/11 by nbarbier@nbarbier_r400_win_tor
Updated description of TMDS reduction block.
Change 33215 on 2002/06/11 by frivas@FL_FRivas
Update to HOS test of a single PNT with linear interpolation and continuous
tessellation.
Change 33201 on 2002/06/11 by frivas@FL FRivas
```

Update to status of HOS test of PNT's with lighting and texturing.

```
Change 33199 on 2002/06/11 by frivas@FL_FRivas
Update to HOS tests for continuous tessellation of PNT's
Change 33195 on 2002/06/11 by csampayo@fl csampayo r400
Edited Windows Registry, Test Format and Test Samples sections
Change 33177 on 2002/06/11 by jowang@jowang R400 win
modified spreadsheet for 10 tap H
updated lbscfp to output fixed point coefs to file
Change 33172 on 2002/06/11 by csampayo@fl_csampayo_r400
Update status for the following test:
r400vgt_hos_PNT_cp_qn_disc_14_04_lit_tex_proj_01
Change 33148 on 2002/06/11 by frivas@FL_FRivas
Update to HOS tests of PNT and PNL
Change 33147 on 2002/06/11 by frivas@FL FRivas
Progress on HOS tests documented.
Change 33098 on 2002/06/10 by bryans@bryans_crayola_doc
Update based on today's discussion
Change 33070 on 2002/06/10 by tho@tho_r400_win
icon cursor testlist updated
Change 33054 on 2002/06/10 by mkelly@fl_mkelly_r400_win_laptop
Update, sc tests...
Change 33041 on 2002/06/10 by jayw@MA JAYW
initial checkin
Change 33040 on 2002/06/10 by jayw@MA_JAYW
several 'admin' type signals
clean and busy
resets
clocks
```

```
removed shadow from queue encoding.
Change 33029 on 2002/06/10 by jacarey@fl_jcarey2
Check In All Files.
Change 33023 on 2002/06/10 by vromaker@MA VIC P4
updated sq top block diagram
Change 33021 on 2002/06/10 by ashishs@fl_ashishs_r400\_win
update
Change 33002 on 2002/06/10 by jacarey@fl_jcarey2
Added RT_GUI_ACTIVE to rbbm_status
Change 32990 on 2002/06/10 by nluu@nluu_r400_doclib_cnnb
- update
Change 32988 on 2002/06/10 by jacarey@fl jcarey2
Remove hirq pending from gui active determination.
Change 32987 on 2002/06/10 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 32981 on 2002/06/10 by jacarey@fl_jcarey2
Fix typo in sub-blk_prefetch packet.
DWORD count should be 7:0 because the largest size is 128 DWORDs.
Change 32973 on 2002/06/10 by jacarey@fl jcarey2
Add descriptions of packets for after June15th Milestone.
Change 32963 on 2002/06/10 by csampayo@fl_csampayo_r400
Updated status for the following tests:
r400vgt_line_list_01
r400vgt_quad_strip_01
r400vgt quad list 01
r400vgt rectangle list 01
r400vgt_polygon_01
r400vgt line loop 01
```

```
r400vgt_point_list_01
r400vgt_line_strip_01
r400vgt_triangle_fan_01
r400vgt_triangle_list_01
r400vgt triangle strip 01
r400vgt_triangle_wflags_01
Change 32960 on 2002/06/10 by tho@tho_r400_win
updated
Change 32947 on 2002/06/10 by chwang@chwang_doc_r400_win_cvd
Update. Added self to Icon and Cursor for test API.
Change 32939 on 2002/06/10 by jasif@jasif r400 win tor
Updated.
Change 32935 on 2002/06/10 by jasif@jasif_r400_win_tor
Updated.
Change 32921 on 2002/06/10 by rvelez@rvelez_r400_win_tor
Updated 6/10
Change 32907 on 2002/06/10 by jacarey@fl jcarey2
Clarification on CMDFIFO Entries in Wait_Until
Change 32903 on 2002/06/10 by rbell@rbell crayola win cvd
updated
Change 32899 on 2002/06/10 by rbell@rbell_crayola_win_cvd
updated
Change 32897 on 2002/06/10 by imuskatb@imuskatb_r400_win_cnimuskatb
Updated
Change 32872 on 2002/06/09 by jimmylau@jimmylau_r400_win_tor
Major update of DCCG specs after specs review.
Change 32809 on 2002/06/07 by efong@efong r400 win tor doc
```

```
updated
Change 32807 on 2002/06/07 by efong@efong_r400_win_tor_doc
updated
Change 32805 on 2002/06/07 by rvelez@rvelez_r400_win_tor
Updated 6/7
Change 32785 on 2002/06/07 by jhoule@MA_JHOULE
Added separable variation, showing it still works.
Weights stored now mean something else (a little bit).
Change 32749 on 2002/06/07 by dclifton@dclifton_r400
Added description of VTE and VE
Change 32729 on 2002/06/07 by jasif@jasif r400 win tor
Updated.
Change 32718 on 2002/06/07 by jacarey@fl jcarey2
Added missing signal: CG_CP_pm_enb to external interfaces.
Change 32683 on 2002/06/07 by efong@efong_r400_win_tor_doc
Updated
Change 32679 on 2002/06/07 by jayw@MA JAYW
new depth blocks
Change 32662 on 2002/06/07 by jacarey@fl jcarey2
Add note on 2D/3D transition detection to PFP section.
Change 32653 on 2002/06/07 by jacarey@fl_jcarey2
Document method of determining 2D/3D transitions....
Change 32647 on 2002/06/07 by bryans@bryans_crayola_doc
```

Update with new top level targets:

```
gen_block_list
detailed_summary
Add: block_list.txt description to appendix
Change 32643 on 2002/06/07 by dclifton@dclifton r400
Update with increased {\bf z} precision, latest I/O and register spec.
Change 32641 on 2002/06/07 by jacarey@fl jcarey2
Add 2D/3D Mode switch assumptions to pseudocode.
Change 32621 on 2002/06/07 by jasif@jasif_r400_win_tor
Updated.
Change 32619 on 2002/06/07 by jacarey@fl jcarey2
Update CMDFIFO_AVAIL for RBBM_STATUS
Change 32609 on 2002/06/07 by jasif@jasif r400 win tor
Updated.
Change 32600 on 2002/06/07 by jacarey@fl jcarey2
Update Soft Reset Register Text
Change 32582 on 2002/06/07 by jhoule@MA JHOULE
Arbitrary filter weight description.
Change 32574 on 2002/06/07 by vgoel@fl vgoel2
added description for test r400vgt_hos_PNT_disc_cp_qn_14_4_light_texture_stress.cpp
and changed status of (% done) for couple of tests.
Change 32569 on 2002/06/07 by lseiler@lseiler r400 win marlboro
Changed SX_RB_mask_type to SX_RB_quad_type, removed RB_SX_index_next, added text and
SX_RB signals for new memory export method.
Change 32562 on 2002/06/07 by gregs@gregs_r400_win_marlboro
removed 3 of the CG_CP_RT signals.
```

Change 32473 on 2002/06/06 by georgev@ma georgev

```
First cut.
Change 32451 on 2002/06/06 by bryans@bryans_crayola_doc
Update status - add DCCIF enhancement request
Change 32444 on 2002/06/06 by askende@andi_r400_docs
updated the RB SX index interface to include "RB SX index op"
Change 32443 on 2002/06/06 by rbell@rbell_crayola_win_cvd
Added keyer tests
Change 32438 on 2002/06/06 by mzhu@mzhu r400 win tor
Update description for ICON and CURSOR width and height registers.
Change 32433 on 2002/06/06 by vgoel@fl_vgoel2
removed a repeated test and changed PNL test to require linear normal instead of
quadratic normal
Change 32428 on 2002/06/06 by vgoel@fl vgoel2
added status of HOS test ( % done)
Change 32374 on 2002/06/06 by jacarey@fl_jcarey2
Fix Typo in Section Name
Change 32369 on 2002/06/06 by jacarey@fl jcarey2
1. Add Section for 2D Indirect Buffer Contents to 2D Appendix
2. Updated CP Initialization Sequence.
Change 32353 on 2002/06/06 by jacarey@fl_jcarey2
Fix Typo in the Trans_Bitblt packet description
Change 32350 on 2002/06/06 by markf@markf_r400_win_marlboro
Updated Status
Change 32334 on 2002/06/06 by semara@semara r400 win tor
update for the text section
```

```
Change 32300 on 2002/06/06 by rbell@rbell_crayola_win_cvd
update after review
Change 32289 on 2002/06/06 by vgoel@fl vgoel2
changed description of tests for continuous tessellation of PNT, PNQ and PNL.
Change 32283 on 2002/06/06 by lseiler@lseiler r400 win marlboro
Updated pdf to match current MemCtl.doc
Change 32279 on 2002/06/06 by dclifton@dclifton_r400
Connected up some rcpeng signals
Change 32274 on 2002/06/06 by lseiler@lseiler r400 win marlboro
Moved and renamed to design/chip/memory/R400_Memory*
Change 32272 on 2002/06/06 by lseiler@lseiler r400 win marlboro
Moved to design/chip/memory
Change 32271 on 2002/06/06 by lseiler@lseiler_r400_win_marlboro
Moved here from design/blocks/mc
Change 32265 on 2002/06/06 by vgoel@fl vgoel2
Changed discrete tessellation tests.
Change 32166 on 2002/06/05 by csampayo@fl csampayo r400
Updated status for the following VGT tests:
r400vgt index offset 01
r400vgt_index_offset_02
r400vgt index offset 03
Change 32156 on 2002/06/05 by rvelez@rvelez_r400_win_tor
Updated 6/5
Change 32143 on 2002/06/05 by csampayo@fl csampayo r400
Updated status for the following VGT tests:
r400vgt index dealloc points 01
```

```
r400vgt_index_dealloc_line_list_01
r400vgt_index_dealloc_triangle_list_01
Change 32122 on 2002/06/05 by jacarey@fl_jcarey2
Add more qualifications to the generation of the destination load
signals.
Change 32114 on 2002/06/05 by tho@tho r400 win
updated
Change 32097 on 2002/06/05 by jacarey@fl_jcarey2
{\tt Remove\ queued\_path\_busy\ from\ rbbm\_status\ register.}
Change 32080 on 2002/06/05 by jacarey@fl_jcarey2
Removed Queued_Path_Busy from the RBBM_STATUS Register
Change 32073 on 2002/06/05 by gregs@gregs r400 win marlboro
update
Change 32061 on 2002/06/05 by nbarbier@nbarbier r400 win tor
Updated TMDSA section.
Change 32055 on 2002/06/05 by rbell@rbell\_crayola\_win\_cvd
Added overlay/VP window swap tests
Change 32040 on 2002/06/05 by vgoel@fl vgoel2
Created descriptions for HOS tests : PNT (discrete, continuous), PNQ (continuous), PNL
(continuous)
Change 31999 on 2002/06/05 by jacarey@fl_jcarey2
Added CP_NRT_BUSY to CP_STAT register
Change 31979 on 2002/06/05 by jacarey@fl_jcarey2
RBBM Spec Updates
Change 31964 on 2002/06/05 by mmantor@mmantor r400 win
added initial sc packer code to the sc.v and a test bench for it
```

Change 31919 on 2002/06/05 by jacarey@fl_jcarey2 Miscellaneous Updates to Diagram to Match the Design. Change 31878 on 2002/06/04 by lseiler@lseiler r400 win marlboro Rev 0.8 Memory Format document with revisions removed Change 31877 on 2002/06/04 by lseiler@lseiler r400 win marlboro Memory Format spec: extensive revision, also moved from the MC block to a chip-level location Change 31859 on 2002/06/04 by rbell@rbell_crayola_win_cvd updated Change 31798 on 2002/06/04 by jimmylau@jimmylau r400 win tor fix the problem that DCCG top level diagram cannot be accessed from the DCCG specs. add sections 3.1, 3.2 and 3.3. Change 31794 on 2002/06/04 by jacarey@fl_jcarey2 1. Added TOC 2. Added clarification of location for vertex and Pixel ALU constants for 2D processing. Change 31779 on 2002/06/04 by rbell@rbell_crayola_win_cvd updated Change 31748 on 2002/06/04 by frivas@FL FRivas Entered 4 tests for HOS in Sheet 1, section 1.5.1.1.9.6 Change 31740 on 2002/06/04 by bryans@bryans_crayola_doc Renamed LB_feature_list.doc to LB_emu_schedule.doc Change 31737 on 2002/06/04 by jacarey@fl_jcarey2

- 1. Remove Unneeded Booleans
- 2. Remove Clamping from ALU
- 3. Temporary Depth Increase for Microcode RAM

Change 31730 on 2002/06/04 by jacarey@fl_jcarey2

Clarifications to which constants to write. Change 31713 on 2002/06/04 by vgoel@fl_vgoel2 no change Change 31711 on 2002/06/04 by markf@markf_r400_win_marlboro nop Change 31707 on 2002/06/04 by markf@markf_r400_win_marlboro Initial rev Change 31701 on 2002/06/04 by csampayo@fl_csampayo_r400 Updated schedule Change 31695 on 2002/06/04 by $jimmylau@jimmylau_r400_win_tor$ Initial Revision of DCCG specs with diagrams for R400. Change 31680 on 2002/06/04 by smoss@smoss_crayola_win new tests Change 31674 on 2002/06/04 by mkelly@fl mkelly r400 win Update Change 31662 on 2002/06/04 by efong@efong r400 win tor doc added in another kludge Change 31607 on 2002/06/03 by frivas@FL_FRivas Number of tests written updated. Change 31592 on 2002/06/03 by jacarey@fl_jcarey2 Checkpoint All Files Change 31591 on 2002/06/03 by jacarey@fl_jcarey2 Fix Typos for Brush Decode Text Change 31580 on 2002/06/03 by csampayo@fl csampayo r400

Updated hos test description

Change 31567 on 2002/06/03 by frising@ma_frising

Added post June15 staging version of texture insts/consts.

Change 31543 on 2002/06/03 by omesh@ma omesh

Updated top level spreadsheet with latest information about RB Color blending test information. I was asked to defer the fog related tests to later and Yung had agreed to do the "No Blend" related tests as they are related to Shader Pipe.

Also added blending test names and new section on stress testing to my RBC document.

Change 31529 on 2002/06/03 by bryans@bryans_crayola_doc

Initial regression distribution schedule for TO

Change 31506 on 2002/06/03 by gregs@gregs r400 win marlboro

DVODATA is 24 bits wide.

Change 31476 on 2002/06/03 by dclifton@dclifton r400

Update to include changes for Z precision, major change in I, J, and W gradient calculation. Update to I/O.

Change 31475 on 2002/06/03 by jacarey@fl jcarey2

- 1. Removed CP_DMA_Busy as a boolean
- 2. Result[31:0] is write data for scratch memory.

Change 31473 on 2002/06/03 by jacarey@fl jcarey2

Update DMA Data Path

Change 31465 on 2002/06/03 by jayw@MA JAYW

added sx export buffers register updated several lesser items

Change 31454 on 2002/06/03 by jasif@jasif_r400_win_tor

Updated.

Change 31453 on 2002/06/03 by jasif@jasif r400 win tor

Updated.

```
Change 31433 on 2002/06/03 by llefebvr@llefebvre_laptop_r400
Backup and minor updates.
Change 31432 on 2002/06/03 by tho@tho_r400_win
updated
Change 31422 on 2002/06/03 by efong@efong_r400_win_tor_doc
Updated
Change 31415 on 2002/06/03 by csampayo@fl_csampayo_r400
Updated status for the following test:
r400vgt_hos_cubic_pos_pnt_discrete_01
Change 31409 on 2002/06/03 by chwang@chwang doc r400 win cvd
Update.
Change 31401 on 2002/06/03 by rbell@rbell crayola win cvd
updated
Change 31395 on 2002/06/03 by jacarey@fl_jcarey2
Checkpoint Planning Spreadsheets
Change 31384 on 2002/06/03 by gregs@gregs_r400\_win\_marlboro
Updated rom_clk register
Change 31275 on 2002/05/31 by rvelez@rvelez r400 win tor
Updated 5/31
Change 31273 on 2002/05/31 by mkelly@fl mkelly r400 win laptop
Basic diamond exit tests....
Change 31262 on 2002/05/31 by gabarca@gabarca_crayola_win_cvd
Added GENS1 and GENFC WT to list od mono/color registers
Change 31248 on 2002/05/31 by jacarey@fl_jcarey2
```

Misc. Updates to RBIU Diagram Change 31228 on 2002/05/31 by tho@tho_r400_win updated testlist Change 31210 on 2002/05/31 by csampayo@fl csampayo r400 Adding Francisco (HOS) Change 31194 on 2002/05/31 by gabarca@gabarca_crayola_win_cvd Write combining done by DCCIF Skid buffer between BIF and VGAHDP Change 31169 on 2002/05/31 by jayw@MA JAYW register index and some formatting Change 31160 on 2002/05/31 by $semara@semara_r400_win_tor$ re-submit Change 31144 on 2002/05/31 by gabarca@gabarca_crayola_win_cvd Moved write combiming to DCCIF, added skid buffer in BIF_VGA doc Change 31097 on 2002/05/31 by vliu@vliu r400 cnvliu100 win cvd Update Change 31096 on 2002/05/31 by gabarca@gabarca crayola win cvd Updated VGAHDP section Change 31082 on 2002/05/31 by rbagley@rbagley_ltxp Adding Jocelyn's recent revision. Change 31076 on 2002/05/31 by jacarey@fl_jcarey2 Added Source Select to Read Input Change 31044 on 2002/05/31 by efong@efong_r400_win_tor_doc Updated Change 31043 on 2002/05/31 by bryans@bryans crayola doc

```
Update...
Change 31034 on 2002/05/31 by jacarey@fl_jcarey2
Make Source Select a Counter which is controlled by Micro Engine.
Change 31026 on 2002/05/31 by jasif@jasif_r400_win_tor
Updated.
Change 31023 on 2002/05/31 by efong@efong_r400_win_tor_doc
put in another problem
Change 30961 on 2002/05/30 by vliu@vliu r400 cnvliu100 win cvd
Update
Change 30959 on 2002/05/30 by jacarey@fl_jcarey2
Add hook to generate real-time microcode...
Change 30955 on 2002/05/30 by jacarey@fl_jcarey2
Fix name of context_done event used for state management.
Change 30934 on 2002/05/30 by jacarey@fl jcarey2
Fix typo in instr prefetch packet
Change 30909 on 2002/05/30 by jacarey@fl jcarey2
Update for error checking.
Change 30893 on 2002/05/30 by jacarey@fl_jcarey2
Fix Typos
Change 30886 on 2002/05/30 by jacarey@fl_jcarey2
Updates for Protected Mode Error Checking...
Change 30864 on 2002/05/30 by jacarey@fl_jcarey2
Update for Conditional Continue Micro Instruction
Change 30854 on 2002/05/30 by rbell@rbell crayola win cvd
```

```
updated
Change 30853 on 2002/05/30 by ashishs@fl_ashishs_r400_win
update
Change 30814 on 2002/05/30 by bryans@bryans_crayola_doc
Update for week of May 27
Change 30804 on 2002/05/30 by gregs@gregs_r400_win_marlboro
updated regs.
Change 30750 on 2002/05/29 by vliu@vliu r400 cnvliu100 win cvd
Update
Change 30747 on 2002/05/29 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 30734 on 2002/05/29 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 30732 on 2002/05/29 by vliu@vliu r400 cnvliu100 win cvd
Update
Change 30722 on 2002/05/29 by tho@tho_r400_win
test list for icon and cursor
Change 30715 on 2002/05/29 by jowang@jowang_R400_win
Includes Vertical Filter control
Change 30713 on 2002/05/29 by rbell@rbell_crayola_win_cvd
updated
Change 30696 on 2002/05/29 by gabarca@gabarca_crayola_win_cvd
Put VGAHDP tests
```

Change 30694 on 2002/05/29 by jacarey@fl jcarey2

```
Added GMC to opcodes for new 2D packets.
Change 30673 on 2002/05/29 by jayw@MA_JAYW
for larry's review
Change 30626 on 2002/05/29 by jhoule@MA_JHOULE
0.9.12: Update all the external interfaces.
Change 30615 on 2002/05/29 by rbell@rbell_crayola_win_cvd
updated
Change 30609 on 2002/05/29 by rbell@rbell crayola win cvd
Added Milestone 2 tests
Change 30601 on 2002/05/29 by jayw@MA_JAYW
ROP3 and Chroma Keying
Change 30595 on 2002/05/29 by gregs@gregs_r400_win_marlboro
pm software review.
Change 30588 on 2002/05/29 by lseiler@lseiler r400 win marlboro
Memory Format spec: final submission before changing file name and location.
Change 30546 on 2002/05/29 by jacarey@fl jcarey2
Remove reference of "Go" signals from the RBBM Spec.
This was a typo.
Change 30502 on 2002/05/29 by jacarey@fl jcarey2
Change COND_MEM_WRITE TO COND_WRITE
Change 30466 on 2002/05/28 by gabarca@gabarca_crayola_win_cvd
Updated write modes
Change 30448 on 2002/05/28 by jasif@jasif_r400_win_tor
Updated.
```

```
Change 30415 on 2002/05/28 by jacarey@fl_jcarey2
Removed \mbox{CP\_CG\_2D\_Mode} signal per power management meeting...
Change 30406 on 2002/05/28 by khabbari@khabbari_r400_win
auto coef cal added
Change 30401 on 2002/05/28 by efong@efong r400 win tor doc
Added in Kaleidoscope Kludge document
Change 30348 on 2002/05/28 by rbell@rbell_crayola_win_cvd
updated
Change 30342 on 2002/05/28 by jacarey@fl_jcarey2
1. Added 8 more bios scratch registers
2. DMA engine waits for MH to accept last write transaction before raising the
interrupt.
Change 30277 on 2002/05/28 by ashishs@fl_ashishs_r400\_win
update
Change 30191 on 2002/05/27 by gabarca@gabarca_crayola_win_cvd
Added more description to VGAHDP features
Change 30178 on 2002/05/27 by imuskatb@imuskatb_r400_win_cnimuskatb
Updated
Change 30157 on 2002/05/27 by rvelez@rvelez r400 win tor
Updated 5/27
Change 30152 on 2002/05/27 by gabarca@gabarca crayola win cvd
Updated Worksheet
Change 30151 on 2002/05/27 by gabarca@gabarca_crayola_win_cvd
Updated worsheet
```

Change 30148 on 2002/05/27 by gabarca@gabarca_crayola_win_cvd

```
Updated VGA modes spreadsheet
Change 30143 on 2002/05/27 by efong@efong_r400_win_tor_doc
Updated
Change 30140 on 2002/05/27 by gabarca@gabarca crayola win cvd
updated excel spreadsheet whit modes
Change 30139 on 2002/05/27 by chwang@chwang_doc_r400_win_cvd
Update (nothing listed).
Change 30089 on 2002/05/25 by jimmylau@jimmylau_r400_win_tor
 \label{prop:eq:add}  \mbox{ Add test cases to verify composite $H$ sync and also feature to disable $H$ sync cutoff in $ \mbox{ } \mbox
section 5.1.1.
Add section 5.4 to test dual CRTCs in progressive scanning mode.
Change 30088 on 2002/05/25 by jimmylau@jimmylau r400 win tor
Explain the algorithm to generate composite H sync, under section 6.2
Change 30067 on 2002/05/24 by mmang@fl mmang r400 win
Updated spec for design review.
Change 30055 on 2002/05/24 by gabarca@gabarca\_crayola\_win\_cvd
Cleaned up, added tables
Change 30020 on 2002/05/24 by jacarey@fl jcarey2
Check everything in...
Change 30019 on 2002/05/24 by nbarbier@nbarbier r400 win tor
Updated TMDS, DVO & HPD sections.
Change 29999 on 2002/05/24 by mkelly@fl_mkelly_r400_win_laptop
Update...
Change 29936 on 2002/05/24 by rvelez@rvelez r400 win tor
Updated 5/24
```

```
Change 29926 on 2002/05/24 by jacarey@fl_jcarey2
Update packet restrictions for Real-Time Processing.
Change 29916 on 2002/05/24 by jacarey@fl jcarey2
Updates to clarify what to do for real-time stream processing.
Change 29909 on 2002/05/24 by gregs@gregs r400 win marlboro
added to PM programming guide (still under construction).
Change 29907 on 2002/05/24 by jacarey@fl jcarey2
Add "invert" to real-time signal conditioning selects.
Change 29884 on 2002/05/24 by rherrick@ma_rherrick_crayola
Once again, I think I submitted before WORD had actually written the changes to the
disk... Hopefully this time it makes it in correctly...
Change 29876 on 2002/05/24 by rherrick@ma rherrick crayola
Update spec to reflect RB_ACCESS_TYPE modes implemented in the parser..
Change 29794 on 2002/05/23 by fhsien@fhsien_r400_win_marlboro
UPDATE NAME
Change 29784 on 2002/05/23 by gregs@gregs_r400_win_marlboro
programmer's guide - initial.
Change 29733 on 2002/05/23 by tho@tho r400 win
updated
Change 29703 on 2002/05/23 by jacarey@fl_jcarey2
Update Compare Function of CP_RT*_Command Register
Change 29691 on 2002/05/23 by jacarey@fl_jcarey2
Update Status and Planning Documents
Change 29643 on 2002/05/23 by jacarey@fl jcarey2
Document Updates
```

```
Change 29613 on 2002/05/23 by smoss@smoss_crayola_win
su test
Change 29593 on 2002/05/22 by jimmylau@jimmylau_r400\_win\_tor
Fill in section for CG interface.
Change 29577 on 2002/05/22 by imuskatb@imuskatb r400 win cnimuskatb
  New Dispout reg test
   Updated CRTC reg test
   Updated Dispout xls doc
Change 29563 on 2002/05/22 by rvelez@rvelez r400 win tor
Updated 5/22
Change 29558 on 2002/05/22 by mkelly@fl_mkelly_r400\_win_laptop
Update
Change 29553 on 2002/05/22 by jacarey@fl_jcarey2
Checkpoint Validation Plan and To Liest
Change 29506 on 2002/05/22 by jacarey@fl jcarey2
Clarified that Sub-block Offset is DWORD offset for ME_INTI.
Change 29488 on 2002/05/22 by snezana@snezana crayola win cvd
small update, no real change
Change 29485 on 2002/05/22 by nbarbier@nbarbier_r400_win_tor
Updated Macro Interface & IO Interface.
Change 29484 on 2002/05/22 by gregs@gregs_r400_win_marlboro
Core Sclk clock PLL connection table + minor updates.
Change 29470 on 2002/05/22 by jacarey@fl_jcarey2
Clarified Swap Controls
Change 29449 on 2002/05/22 by jacarey@fl jcarey2
```

```
Added RBBM_STATUS2 Register
Added CP_RBBM_rt_enable to RBBM_STATUS register
Change 29438 on 2002/05/22 by jacarey@fl jcarey2
Clarify that DST TYPE=7 not used in R400...since R128
Change 29437 on 2002/05/22 by jacarey@fl jcarey2
Corrections for 2D GMC Processing.
Change 29358 on 2002/05/21 by lseiler@lseiler_r400_win_marlboro
RB Spec: Updated SX section, other updates in process
Change 29343 on 2002/05/21 by jacarey@fl_jcarey2
Update CP Specs to Reflect 4KByte Alignment for Surfaces.
Change 29335 on 2002/05/21 by imuskatb@imuskatb r400 win cnimuskatb
updated crc test
  first crtc register test
Change 29322 on 2002/05/21 by rvelez@rvelez_r400_win_tor
Added +1 to disallow multiple file checkouts
Change 29320 on 2002/05/21 by efong@efong_r400_win_tor_doc
changed it to +1 to allow for locking by just one person
Change 29310 on 2002/05/21 by askende@andi r400 docs
fixed typo
Change 29305 on 2002/05/21 by jacarey@fl_jcarey2
Clarify compare function for Cond_Mem_Write and Wait_Reg_Mem
Change 29286 on 2002/05/21 by jacarey@fl_jcarey2
Clarification of signals used by the Wait_Until and RTS_WAIT_Until
registers.
```

Change 29275 on 2002/05/21 by $rvelez@rvelez_r400_win_tor$

```
Updated 5/17
Change 29272 on 2002/05/21 by tho@tho_r400\_win
updated
Change 29262 on 2002/05/21 by rvelez@rvelez r400 win tor
Updated Top-level DC interface to match source code 5/21
Change 29256 on 2002/05/21 by chwang@chwang_doc_r400_win_cvd
Weekly update.
Change 29237 on 2002/05/21 by efong@efong_r400_win_tor_doc
Updated to be the same as the test plan
Change 29234 on 2002/05/21 by jasif@jasif_r400 win_tor
Updated status.
Change 29231 on 2002/05/21 by jacarey@fl jcarey2
Updated compare function bit width for Cond Mem Write and Wait Reg Mem.
Text Updates to MPEG_Index packet
Change 29227 on 2002/05/21 by efong@efong r400 win tor doc
changed from x130 to x132
Change 29223 on 2002/05/21 by efong@efong r400 win tor doc
Updated
Change 29199 on 2002/05/21 by jacarey@fl_jcarey2
Updates to register descriptions and fix typos.
Change 29108 on 2002/05/20 by pmitchel@pmitchel_entire_depot_win
add to depot
Change 29100 on 2002/05/20 by pmitchel@pmitchel_entire_depot_win
adding file to depot
Change 29071 on 2002/05/20 by gregs@gregs r400 win marlboro
```

```
added few gnd/pwr pins for TMDS and DACs.
Change 29061 on 2002/05/20 by csampayo@fl_csampayo_r400
Udated status for the following test:
r400vgt hos simple linear PNT discrete 01
Change 29012 on 2002/05/20 by kcorrell@kcorrell r400 docs marlboro
updated to interface and display interface
Change 29003 on 2002/05/20 by gregs@gregs_r400_win_marlboro
update
Change 28998 on 2002/05/20 by jacarey@fl_jcarey2
Fix Typos in the MPEG INDEX packet.
Change 28980 on 2002/05/19 by fhsien@fhsien r400 win marlboro
Update
Change 28859 on 2002/05/17 by mzhu@mzhu r400 win tor
Add LUT bypassing registers. Update LUT register descriptions
Change 28801 on 2002/05/17 by smoss@smoss_crayola_win
SU tests with golds
Change 28787 on 2002/05/17 by jacarey@fl jcarey2
Updates to:
1. Wait Reg Mem
2. Cond Mem Write
Change 28768 on 2002/05/17 by kmahler@kmahler r400 doc lib
Revised Paramtterized Test Case chapter to inlcude changes for specifying the Test Case
Number and other enhancements.
Added section "Specify Input Arguments to the Test Program".
Change 28720 on 2002/05/17 by jacarey@fl_jcarey2
No Clamping required by the CP for UR & LL compound indices.
```

```
Change 28718 on 2002/05/17 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 28711 on 2002/05/17 by jacarey@fl_jcarey2
Remove reference to non-queued path for BIF transaction.
Change 28679 on 2002/05/17 by fhsien@fhsien r400 win marlboro
Update RBD
Change 28662 on 2002/05/17 by vliu@vliu_r400_cnvliu100_win_cvd
Reformat
Change 28651 on 2002/05/17 by vliu@vliu r400 cnvliu100 win cvd
Update
Change 28572 on 2002/05/16 by csampayo@fl_csampayo_r400
Updated status for the following tests:
r400vgt dma swap indx16 01
r400vgt_pass_thru_all_prims_01
Change 28562 on 2002/05/16 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 28532 on 2002/05/16 by vliu@vliu r400 cnvliu100 win cvd
Update
Change 28526 on 2002/05/16 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 28512 on 2002/05/16 by jacarey@fl_jcarey2
{\tt Max} Context resets to 7
Change 28507 on 2002/05/16 by jacarey@fl_jcarey2
Misc Updates
Change 28493 on 2002/05/16 by rbell@rbell crayola win cvd
```

```
updated
Change 28483 on 2002/05/16 by jacarey@fl_jcarey2
Add Max Context to address
Change 28455 on 2002/05/16 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 28437 on 2002/05/16 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 28435 on 2002/05/16 by gregs@gregs r400 win marlboro
added interrupt registers.
Change 28429 on 2002/05/16 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 28423 on 2002/05/16 by jacarey@fl_jacarey
Update All
Change 28418 on 2002/05/16 by jacarey@fl jacarey
Update source clipping equation
Change 28412 on 2002/05/16 by jimmylau@jimmylau_r400_win_tor
Fine adjust the parameter values in normal CRTC tests in section 5.1.1
Change 28404 on 2002/05/16 by ashishs@fl_ashishs_r400_win
update
Change 28392 on 2002/05/16 by omesh@ma_omesh
Added some more comments for the test group levels, to specify the goal of each group
of tests.
Change 28385 on 2002/05/16 by rbell@rbell_crayola_win_cvd
Updated
```

```
Change 28367 on 2002/05/16 by jasif@jasif\_r400\_win tor
Updated after VGA testplan review.
Change 28362 on 2002/05/16 by omesh@ma omesh
Checking in top-level details of RBC related tests. Document (*.doc) links are not yet
in place, as document to be linked (RBC.doc) is not yet "section labelled".
Change 28348 on 2002/05/16 by bryans@bryans crayola doc
Weekly DV goals for Video IP (Summary)
Change 28327 on 2002/05/16 by jacarey@fl_jacarey
Checkpoint Everything
Change 28325 on 2002/05/16 by jacarey@fl jacarey
Microcode Update
Update 2D Appendix for source clipping
Update PM4 spec for Reg-to-Mem Code
Change 28275 on 2002/05/15 by fhsien@fhsien_r400_win_marlboro
Update RBD part of list
Change 28261 on 2002/05/15 by bryans@bryans crayola doc
Change emulation to M1/M2/M3 lineup
Change 28256 on 2002/05/15 by omesh@ma omesh
Made some corrections to misleading wording and added some more information to
document.
Change 28232 on 2002/05/15 by jacarey@fl jacarey
Update Number Formats for the 2D Packets.
Change 28224 on 2002/05/15 by fhsien@fhsien_r400_win_marlboro
Update RBD testplan
Change 28223 on 2002/05/15 by jacarey@fl jacarey
Fix typo in Width format -- changed to 13:0
```

```
Change 28196 on 2002/05/15 by jacarey@fl jacarey
Update Top-Level Diagrams
Change 28149 on 2002/05/15 by gregs@gregs\_r400\_win\_marlboro
general update
Change 28148 on 2002/05/15 by rbell@rbell crayola win cvd
Updated test plan
Change 28138 on 2002/05/15 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 28130 on 2002/05/15 by gabarca@gabarca_crayola_win_cvd
Finished for Milestone 1, in bold
Change 28104 on 2002/05/15 by kmahler@kmahler r400 doc lib
Added more detailed explanation of using RENDER STATE's low-level interface per Carlos'
note.
Change 28098 on 2002/05/15 by jasif@jasif_r400_win_tor
Added testlist.
Change 28095 on 2002/05/15 by georgev@ma georgev
Examples added.
Change 28092 on 2002/05/15 by csampayo@fl csampayo r400
Updated status for the following test:
r400vgt dma swap indx32 01
Change 28087 on 2002/05/15 by omesh@ma omesh
Added some more stuff.... Document still incomplete with lots of areas of construction.
Will add test total counts today and update spreadsheet....
Change 28055 on 2002/05/15 by imuskatb@imuskatb_r400_win_cnimuskatb
   add new crtc test under debug
   updated crtc doc
```

Change 28047 on 2002/05/15 by jacarey@fl_jacarey 1. CP Spec : Update Real-Time Register Names 2. PM4 Spec : Updates to ME_Init and Event_Timestamp_Write Change 28046 on 2002/05/15 by vliu@vliu_r400_cnvliu100_win_cvd Update Change 28011 on 2002/05/14 by kmahler@kmahler r400 doc lib Added documentation for the following: 1) Revised Parameterized Test Cases using input arguments and the "Set_Default_Values()" function. 2) VFD section from Michael Kelly. Change 28006 on 2002/05/14 by imuskatb@imuskatb r400 win cnimuskatb updated Change 28004 on 2002/05/14 by gabarca@gabarca crayola win cvd tried to finish Change 28003 on 2002/05/14 by mzhu@mzhu_r400_win_tor move dcp test plan to design/blocks directory add test plan for first milestone Change 27980 on 2002/05/14 by jacarey@fl jacarey Fixed typo on data width for writing to scratch memory. Change 27974 on 2002/05/14 by vliu@vliu r400 cnvliu100 win cvd Update. Change 27956 on 2002/05/14 by jayw@MA_JAYW added lower precision for majority of DeGamma table. New dither documentation in blend

Change 27949 on 2002/05/14 by rbell@rbell crayola win cvd

small fix

```
Change 27946 on 2002/05/14 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 27945 on 2002/05/14 by rvelez@rvelez r400 win tor
Updated May 14
Change 27943 on 2002/05/14 by rbell@rbell crayola win cvd
Added more tests for Milestone 1
Change 27926 on 2002/05/14 by imuskatb@imuskatb_r400_win_cnimuskatb
updated all crtc test to include DACA_EN
   Updated crtc emu features doc
   updated display_out to include crc computation
   added one debug test for dispout
Change 27914 on 2002/05/14 by jacarey@fl_jacarey
Update Local Address Map
Change 27876 on 2002/05/14 by lseiler@lseiler_r400_win_marlboro
RB register and architecture overview
Change 27869 on 2002/05/14 by jacarey@fl jacarey
Baseline CP Validation Plans
Change 27866 on 2002/05/14 by jacarey@fl jacarey
Added CGM rtr signals back to the RBBM.
Change 27861 on 2002/05/14 by jacarey@fl_jacarey
Updated Scratch Memory Connections
Updated Me_Debug_data Connections
Change 27848 on 2002/05/14 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 27835 on 2002/05/14 by efong@efong_r400_win_tor_doc
changed the h/v_{total} for 600 and setup some more worksheets for printing
```

```
Change 27832 on 2002/05/14 by jacarey@fl_jacarey
{\tt ME\_Init~Shader~Base~addresses~are~in~Instructions,~not~DWORDs}
Change 27824 on 2002/05/14 by mkelly@fl_mkelly_r400_win_laptop
Update
Change 27823 on 2002/05/14 by efong@efong r400 win tor doc
line buffer test description
Change 27822 on 2002/05/14 by gregs@gregs_r400_win_marlboro
update
Change 27818 on 2002/05/14 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 27761 on 2002/05/13 by gabarca@gabarca crayola win cvd
Updated features for milestone 1
Change 27752 on 2002/05/13 by rbell@rbell crayola win cvd
Update
Change 27751 on 2002/05/13 by jayw@MA_JAYW
updated mc interface to eliminate access_subset and not the
offsetting of the access address by the frame buffer offset for
non-external accesses.
Change 27729 on 2002/05/13 by jacarey@fl jacarey
Changed Num Constants to Max Contexts in the ME Init Packet.
Change 27717 on 2002/05/13 by llefebvr@llefebvre laptop r400
Changed CF opcodes, SQ->SP interface and SP->SQ constant index load interface.
Change 27714 on 2002/05/13 by jhoule@MA_JHOULE
TP corrections
```

Change 27713 on 2002/05/13 by $georgev@ma_georgev$

```
Some extra clarification.
Change 27707 on 2002/05/13 by georgev@ma_georgev
Added sections from verifcatin spec.
Change 27706 on 2002/05/13 by rvelez@rvelez r400 win tor
Updated 5/13
Change 27695 on 2002/05/13 by jacarey@fl_jacarey
Update Address Map
Top-Level Diagram Updates
Change 27679 on 2002/05/13 by jacarey@fl jacarey
Update Local Addresses
Change 27673 on 2002/05/13 by jasif@jasif_r400_win_tor
Updated.
Change 27670 on 2002/05/13 by imuskatb@imuskatb_r400_win_cnimuskatb
   Updated test to 4 active lines
   updated crtc test desp
Change 27669 on 2002/05/13 by chwang@chwang_doc_r400_win_cvd
Added a few missing models.
Change 27665 on 2002/05/13 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 27664 on 2002/05/13 by rbell@rbell crayola win cvd
Graphics/Overlay tests for milestone 1
Change 27658 on 2002/05/13 by mdoggett@MA_MDOGGETT_LT
Added vertex fetch slide
Change 27657 on 2002/05/13 by jhoule@MA JHOULE
{\tt Added\ EXP\_ADJUST,\ pseudo-assembly\ for\ border\ color,\ and\ fast-path\ mention}
```

```
Change 27654 on 2002/05/13 by efong@efong_r400_win_tor_doc
Updated
Change 27653 on 2002/05/13 by semara@semara_r400_win_tor
update the render secation
Change 27651 on 2002/05/13 by mdoggett@MA MDOGGETT LT
Merged TC slides in
Change 27650 on 2002/05/13 by tho@tho_r400_win
  updated
Change 27648 on 2002/05/13 by mdoggett@MA\_MDOGGETT\_LT
First version of TC SW review
Change 27645 on 2002/05/13 by jhoule@MA JHOULE
For merging with Michael
Change 27644 on 2002/05/13 by jacarey@fl jacarey
Instruction Load packets support loading of the entire instruction
memory.
Change 27640 on 2002/05/13 by rbell@rbell_crayola_win_cvd
Added
Change 27634 on 2002/05/13 by jacarey@fl jacarey
update cp spec.
Change 27623 on 2002/05/13 by chwang@chwang_doc_r400_win_cvd
Small update
Change 27621 on 2002/05/13 by csampayo@fl_csampayo_lt_r400
Updated VGT tests status
Change 27596 on 2002/05/13 by rbell@rbell crayola win cvd
updated
```

```
Change 27592 on 2002/05/13 by ygiang@ygiang_r400_win_marlboro_p4
update
Change 27589 on 2002/05/13 by fhsien@fhsien r400 win home marlboro
Change little at home
Change 27588 on 2002/05/13 by smoss@smoss crayola win
update
Change 27536 on 2002/05/10 by ashishs@fl_ashishs_r400_win
update
Change 27525 on 2002/05/10 by fhsien@fhsien r400 win marlboro
Update with new info
Change 27523 on 2002/05/10 by csampayo@fl csampayo r400
Updated status for the following test:
r400vgt dma index rectangle list 01
Change 27510 on 2002/05/10 by frising@ma_frising
v.1.39
-4KB aligned for all textures
-Update data format table to be consistent with RB, add interpolate
and replicate YUV formats
-Move to Larry's convention for endian swapping
-Remove FETCH VALID ONLY in vertex instruction and replace with MUST BE ONE
-Start to clean up usage tables. Lots to do still.
Change 27502 on 2002/05/10 by georgev@ma georgev
First revision so that everyone else can get it in Perforce.
Change 27499 on 2002/05/10 by jasif@jasif_r400_win_tor
Updated dccif model owner.
Change 27488 on 2002/05/10 by rbell@rbell crayola win cvd
Updated for milestone 1 GRP/OVL features
```

```
Change 27467 on 2002/05/10 by jacarey@fl jacarey
Fix Typo
Change 27463 on 2002/05/10 by jhoule@MA JHOULE
For SW review (unfinished)
Change 27455 on 2002/05/10 by gregs@gregs r400 win marlboro
update
Change 27439 on 2002/05/10 by jacarey@fl_jacarey
Update
Change 27431 on 2002/05/10 by jacarey@fl_jacarey
Instructions Added to Simplify Reading the Micro RAM
Fix Typo in the Pseudocode.
Change 27421 on 2002/05/10 by jacarey@fl jacarey
Updates for ME_INIT Packet
Change 27415 on 2002/05/10 by jacarey@fl_jacarey
Update for Registers and Text Update to the CP Specification.
Change 27406 on 2002/05/10 by jacarey@fl_jacarey
Update to Internal Address Map (Comments Only)
Change 27386 on 2002/05/10 by imuskatb@imuskatb r400 win cnimuskatb
   Updated crtc_contorller to handle boundary conditions
   golden for the first 4 test of crtc
   dispout updated7
Change 27385 on 2002/05/10 by jacarey@fl_jacarey
Checkpoint Updates to Specification
Update list of things to do.
Change 27373 on 2002/05/10 by omesh@ma omesh
Added test cases for Destination Color Blending as derived from Source Color Blending
and also added notes on Source Alpha Blending test strategy.
```

```
Change 27329 on 2002/05/10 by jhoule@MA_JHOULE
Changed PREDICATE_CONDITION to PRED_CONDITION in PRED_SELECT description.
Change 27325 on 2002/05/10 by llefebvr@llefebvre laptop r400
Presentation for the 5/13.
Change 27323 on 2002/05/10 by jhoule@MA JHOULE
1.38
Instruction changes:
Added PRED_SELECT and PRED_CONDITION for the sequencer to manage pixel masks.
Moved FETCH_VALID_ONLY to bit 19 in TFetch, and added it to VFetch.
Change 27322 on 2002/05/10 by jacarey@fl_jacarey
1. Remove CONST_PREFETCH Packet
2. Update LCC pseudocode for PFP
Change 27316 on 2002/05/10 by jacarey@fl jacarey
Optional processing of Type-2 and Type-3 NOPs by ME.
Change 27314 on 2002/05/10 by rherrick@ma_rherrick_crayola
Not sure what was checked in for last revision since SAMBA was acting flaky on me...
Rechecking in the changes
Change 27313 on 2002/05/10 by rherrick@ma_rherrick_crayola
Fixed ADDRESS documentation to match implementation...
Change 27302 on 2002/05/10 by smorein@smorein r400
First rewrite of programing guide. Some parts still missing, will go in on monday.
Change 27264 on 2002/05/09 by jowang@jowang R400 win
VF Control -- RGB
Change 27254 on 2002/05/09 by jacarey@fl_jacarey
STQ is now 114 deep.
```

Change 27251 on 2002/05/09 by jacarey@fl jacarey

```
Update CNT register loading
Change 27241 on 2002/05/09 by jacarey@fl_jacarey
Update PM4 spec for me init
Change 27237 on 2002/05/09 by jacarey@fl jacarey
Updated Picture
Change 27233 on 2002/05/09 by grayc@grayc_r400_win
describes test bench for cp/rbbm
Change 27230 on 2002/05/09 by jasif@jasif_r400_win_tor
Vga emulator features and test schedule.
Change 27223 on 2002/05/09 by ashishs@fl ashishs r400 win
update
Change 27221 on 2002/05/09 by gregs@gregs r400 win marlboro
updated with Y25LF05 info.
Change 27214 on 2002/05/09 by omesh@ma_omesh
Added RBC Verification Plan (new file), currently under development, as well as a link
to it from the main RB Verification Plan document.
Change 27208 on 2002/05/09 by chwang@chwang doc r400 win cvd
Small update.
Change 27188 on 2002/05/09 by jacarey@fl jacarey
Update
Change 27153 on 2002/05/09 by jacarey@fl_jacarey
Checkpoint Partial Update of CP Registers.
Change 27152 on 2002/05/09 by ygiang@ygiang_r400_win_marlboro_p4
update
Change 27127 on 2002/05/09 by mkelly@fl mkelly r400 win laptop
```

```
Update
Change 27064 on 2002/05/08 by nbarbier@nbarbier_r400_win_tor
Updated register test information.
Change 27053 on 2002/05/08 by gabarca@gabarca_crayola_win_cvd
submit
Change 27048 on 2002/05/08 by jacarey@fl_jacarey
Corrections for 8 Sub Blocks
Change 27046 on 2002/05/08 by jacarey@fl jacarey
Checkpoint Specifications
1. ME INIT Packet
2. Updates to CP Registers
... Still Not Done Yet ...
Change 27042 on 2002/05/08 by imuskatb@imuskatb_r400_win_cnimuskatb
  Updated documents
   fix latest lb, fix chunck_size
  new crtc test with golden
Change 27039 on 2002/05/08 by sallen@sallen_r400_win_marlboro
updates
Change 27038 on 2002/05/08 by rvelez@rvelez r400 win tor
Updated schedule for CRTC/DISPOUT
Change 27021 on 2002/05/08 by jimmylau@jimmylau_r400_win_tor
{\tt H} sync and {\tt V} sync polarities are set to different values for normal CRTC and {\tt VGA} CRTC
test cases.
Add a list of CRTC registers that are not tested in normal CRTC register test because
they are either read-only or write only.
Change 27009 on 2002/05/08 by rvelez@rvelez_r400_win_tor
Updated May 8
```

```
Change 26998 on 2002/05/08 by jacarey@fl jacarey
Add Booleans to Source Select
Change 26996 on 2002/05/08 by khabbari@khabbari r400 win
lb test plan changes
Change 26991 on 2002/05/08 by tien@ma spinach
Updated the tp area page.
Change 26984 on 2002/05/08 by rbagley@ma_rbagley_ltxp
Updates include a round of revision from Andi Skende, including updates to the shader
pipe related material.
Change 26978 on 2002/05/08 by ygiang@ygiang r400 win marlboro p4
v1
Change 26959 on 2002/05/08 by jacarey@fl jacarey
Update Invalidate_State and Subblock_Prefetch packets
to support eight sub-blocks.
Change 26949 on 2002/05/08 by jacarey@fl_jacarey
Fix typo in rbbm_perf_cntl register.
Change 26934 on 2002/05/08 by tho@tho_r400_win
   -name of document changed
  -icon/cursor status updated
Change 26928 on 2002/05/08 by khabbari@khabbari_r400_win
added the start of line to lb/dcp interface doc
Change 26924 on 2002/05/08 by efong@efong_r400_win_tor_doc
moved this file
Change 26923 on 2002/05/08 by efong@efong_r400_win_tor_doc
moved to be with the design block.
Change 26922 on 2002/05/08 by nbarbier@nbarbier r400 win tor
```

```
Added register test for DCIO block.
Change 26920 on 2002/05/08 by tho@tho_r400_win
   updated document w/ icon cursor status
Change 26919 on 2002/05/08 by efong@efong_r400_win_tor_doc
1st rev of the scaler feature list for emulator
Change 26901 on 2002/05/08 by jacarey@fl jacarey

    Set_State supports eight sub-blocks

2. Updates to Set_CF_Constant
Change 26886 on 2002/05/08 by jacarey@fl_jacarey
Update name of register that CP writes for the Booleans.
Change 26885 on 2002/05/08 by jacarey@fl jacarey
1. Set State:
  a. Eight Sub-Blocks
  b. Sub-Block Size Encoding = (n+1) *8
2. New Packet : Set_CF_Constant
Change 26884 on 2002/05/08 by jacarey@fl_jacarey
Sub-block Size Encoding Update
Change 26854 on 2002/05/07 by csampayo@fl csampayo r400
Updated VGT test status, as well as, limited other units test status to 99%
Change 26843 on 2002/05/07 by jowang@jowang R400 win
Totally out of date.
Change 26842 on 2002/05/07 by imuskatb@imuskatb_r400_win_cnimuskatb
  Test and Feature list. First pass
Change 26841 on 2002/05/07 by jowang@jowang R400 win
```

Initial VF design.

Change 26839 on 2002/05/07 by jowang@jowang_R400_win renamed to VF Block.vsd Change 26835 on 2002/05/07 by jowang@jowang_R400_win Initial VF Design Change 26821 on 2002/05/07 by rvelez@rvelez r400 win tor Split up DCCIF and DCCARB documents Change 26808 on 2002/05/07 by jacarey@fl_jacarey Moving Microcode Source Change 26798 on 2002/05/07 by jacarey@fl_jacarey Update Revision Change 26795 on 2002/05/07 by jacarey@fl jacarey Added Type-0 Packet Support to Microcode. Change 26792 on 2002/05/07 by jayw@MA JAYW added notebook Change 26784 on 2002/05/07 by $jayw@MA_JAYW$ DeGamma increased precision to avoid errors when temporarily over 1.0 due to 0.055 add. Change 26779 on 2002/05/07 by rvelez@rvelez_r400_win_tor Updated 5/7/02 Change 26760 on 2002/05/07 by ygiang@ygiang_r400_win_marlboro_p4 updated: test list Change 26759 on 2002/05/07 by bryans@bryans_crayola_doc Updated as per status meeting

Change 26727 on 2002/05/07 by smoss@smoss_crayola_win

SU tests Change 26721 on 2002/05/07 by llefebvr@llefebvre_laptop_r400 presentation for the SW meeting (draft) Change 26711 on 2002/05/07 by ashishs@fl ashishs r400 win update Change 26701 on 2002/05/07 by rbell@rbell_crayola_win_cvd First draft of DCP feature list Change 26642 on 2002/05/06 by jimmylau@jimmylau_r400_win_tor Add feature to start ${\tt H}$ and ${\tt V}$ counter at some even offset other than ${\tt O}_{\:\raisebox{1pt}{\text{\circle*{1.5}}}}$ Add feature to choose whether to cutoff H sync A/B at when H blank ends. Change 26638 on 2002/05/06 by $vliu@vliu_r400_cnvliu100_win_cvd$ Update Change 26627 on 2002/05/06 by lkang@lkang_r400_win_tor update on tristate h/vsync's in d1, D2 & D3 Change 26614 on 2002/05/06 by jacarey@fl jacarey Checkpoint Code Change 26605 on 2002/05/06 by jacarey@fl jacarey Update to Micro Instructions Change 26598 on 2002/05/06 by jacarey@fl jacarey Update to Access Jump Table in RAM Change 26574 on 2002/05/06 by rvelez@rvelez_r400_win_tor Updated May 6/02 Change 26555 on 2002/05/06 by mdoggett@MA_MDOGGETT_LT Updates to TP, TPC, MH interfaces; L1 Tags; TCO diagram; TCD Padding; L2 cache pixel formats table; L2 cacheline format conversions table; 2d 12 one lyaer cacheline format

```
Change 26554 on 2002/05/06 by jacarey@fl jacarey
MicroCode for Typel packets.
Change 26532 on 2002/05/06 by lkang@lkang r400 win tor
Toronto milestone #1 schedule
Change 26529 on 2002/05/06 by jimmylau@jimmylau r400 win tor
Change registers DxCRTC\_H/V\_SYNC\_A\_END to 13 bits, due to added feature of testing H/V
counter wrap around.
Update VGA vertical timing parameters to 11 bits.
Change 26525 on 2002/05/06 by jimmylau@jimmylau_r400_win_tor
Change register name from \texttt{DxCRTC\_H/V\_COUNT\_OFFSET} to \texttt{DxCRTC\_H/V\_SYNC\_A\_START}.
Change test cases for H/V counter wrap around so that H/V SYNC A START are even
since hardware does not support odd number \mbox{H/V\_SYNC\_A\_START.}
Change 26510 on 2002/05/06 by tho@tho r400 win
  updated
Change 26506 on 2002/05/06 by vliu@vliu_r400_cnvliu100_win_cvd
Rename the file
Change 26505 on 2002/05/06 by jacarey@fl jacarey
2D Indirect Buffer Invalidates Pointers instead
of the hardware doing this implicitly.
Change 26504 on 2002/05/06 by vliu@vliu r400 cnvliu100 win cvd
emulation / simulation feature list
Change 26500 on 2002/05/06 by nluu@nluu r400 doclib cnnb
- update
Change 26495 on 2002/05/06 by chwang@chwang_doc_r400_win_cvd
Update.
```

Change 26491 on 2002/05/06 by efong@efong_r400_win_tor_doc

```
Updated
Change 26487 on 2002/05/06 by jasif@jasif_r400_win_tor
Updated.
Change 26484 on 2002/05/06 by mmantor@mmantor r400 win
update per comments from Doug
Change 26478 on 2002/05/06 by ygiang@ygiang_r400_win_marlboro_p4
added: more coments and tests to list
Change 26474 on 2002/05/06 by jacarey@fl_jacarey
Checkpoint Microcode Before CPP Updates
Change 26473 on 2002/05/06 by rbell@rbell crayola win cvd
Added VeriBench User's Guide
Change 26470 on 2002/05/06 by imuskatb@imuskatb_r400_win_cnimuskatb
updated
Change 26465 on 2002/05/06 by rbell@rbell_crayola_win_cvd
updated
Change 26395 on 2002/05/03 by mkelly@fl_mkelly_r400_win_laptop
Update
Change 26388 on 2002/05/03 by mmantor@mmantor r400 win
added state module description
Change 26377 on 2002/05/03 by gregs@gregs_r400_win_marlboro
update.
Change 26371 on 2002/05/03 by scroce@scroce_r400_win_marlboro
update
```

Change 26370 on 2002/05/03 by jayw@MA_JAYW

```
friday night gamma fixed
Change 26364 on 2002/05/03 by rvelez@rvelez_r400_win_tor
Update May 3/02
Change 26354 on 2002/05/03 by hartogs@fl hartogs
Fixed order of selections for VGT OTUPUT PATH CNTL register.
Change 26332 on 2002/05/03 by jacarey@fl_jacarey
Checkpoint All Documents and Microcode.
Change 26326 on 2002/05/03 by georgev@ma_georgev
Changes for first primlib tests, changes to tg.cpp to support
ranges, SX spreadsheet and verification document, and a tg.h
that is out of date, but the good one is missing.
Change 26301 on 2002/05/03 by jacarey@fl jacarey
1. Baseline Checklist for Post June 15th
2. Microcode Update
  a. Main Loop
Change 26292 on 2002/05/03 by gregs@gregs_r400_win_marlboro
added to verification section.
Change 26281 on 2002/05/03 by ygiang@ygiang_r400_win_marlboro_p4
updated: comments
Change 26252 on 2002/05/03 by jimmylau@jimmylau r400 win tor
removed test features : stereosync and dual CRTCs
add test features : H/V counter tests, CRTC register tests
Change 26250 on 2002/05/03 by gregs@gregs_r400_win_marlboro
spelling
Change 26242 on 2002/05/03 by jacarey@fl_jacarey
1. REPL command Added to OPER field.
2. Clarification that SUB* implies "SRC0 - SRC1"
```

3. MOV instruction is translated to:

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Change 26237 on 2002/05/03 by jacarey@fl_jacarey Indicate input stage as a repeater. Change 26229 on 2002/05/03 by ashishs@fl ashishs r400 win update Change 26224 on 2002/05/03 by bryans@bryans_crayola_doc Renamed: R400 VideoIP DV Methodology -> VideoIP DV Methodology Moved document to simulator/environment directory Change 26205 on 2002/05/03 by jacarey@fl jacarey Microcode: Changed jbit bool=<bit> @<address>; to: jbit @<address>;bool=<bit>; Change 26166 on 2002/05/02 by rvelez@rvelez r400 win tor Split up DCCIF Interface Spec to separate DCCIF and DCCARB interfaces Change 26165 on 2002/05/02 by rvelez@rvelez_r400_win_tor Split up DCCIF and DCCARB interfaces into two documents Change 26154 on 2002/05/02 by fhsien@fhsien_r400_win_marlboro Update Depth tests Change 26152 on 2002/05/02 by vliu@vliu r400 cnvliu100 win cvd Modify the structure of the test_lib/src tree. Change 26149 on 2002/05/02 by jayw@MA_JAYW more fixes now starting monotinicity Change 26138 on 2002/05/02 by smoss@smoss_crayola_win SU tests and golds

Change 26118 on 2002/05/02 by gregs@gregs r400 win marlboro

changed default value of SUBSYS ID ROM based strap.

oper=shl;immed=0x00000000;

```
Change 26111 on 2002/05/02 by efong@efong_r400_win_tor_doc
Initial revision
Change 26110 on 2002/05/02 by scroce@scroce_r400_win_marlboro
Added examples and a lot of info.
Change 26103 on 2002/05/02 by smoss@smoss crayola win
SU tests, golds
Change 26067 on 2002/05/02 by rvelez@rvelez_r400_win_tor
Updated 5/2
Change 26066 on 2002/05/02 by aashkar@fl aashkar
Removed unused address
Change 26065 on 2002/05/02 by aashkar@fl aashkar
fixed typo
Change 26057 on 2002/05/02 by llefebvr@llefebvre_laptop_r400
Modification on the Control flow instructions.
Change 26055 on 2002/05/02 by rherrick@ma_rherrick_crayola
Parser is working... Producing same results as Hard coded version... Documentation
updated to reflect new byteEnable and Tag inclusion in ADDRESS directive...
Change 26054 on 2002/05/02 by ygiang@ygiang_r400_win_marlboro_p4
Added: Test list for SP
Change 26046 on 2002/05/02 by khabbari@khabbari r400 win
small changes
Change 26037 on 2002/05/02 by aashkar@fl_aashkar
Added RT_ENABLE to address map
Change 26036 on 2002/05/02 by lseiler@lseiler_r400_win_marlboro
```

Replaced by the Autoreg generated register description Change 26035 on 2002/05/02 by jacarey@fl_jacarey Type 1 Packet Corrections Change 26033 on 2002/05/02 by bryans@bryans crayola doc Update to include emulator diagram/flow with reify Change 26030 on 2002/05/02 by aashkar@fl_aashkar Added missing Address for Write Confirm ID FIFO Change 26028 on 2002/05/02 by jayw@MA_JAYW added example and fixed some gamma bugs Change 26025 on 2002/05/02 by jacarey@fl jacarey Microcode 1. Typel Packet 2. NOP Packet 3. Reserved Bit Check Routine 4. Invalid Opcode Check Routine Change 26013 on 2002/05/02 by kcorrell@kcorrell_r400_docs_marlboro updated TC interface, DC interface and buffering, added auxiliary logic section. Modified address translation to include HDP_FB_START and ROM_BASE. Change 25975 on 2002/05/02 by jacarey@fl jacarey Clarified use of the texture constants. Change 25958 on 2002/05/02 by jacarey@fl jacarey Partial Update to Top-Level Diagram Change 25957 on 2002/05/02 by jacarey@fl_jacarey

Partial updates for supporting new 2D packets.

Removed signals that no longer exist:

RBBM_CP_3d_idle CP RBBM 2d idle

Change 25955 on 2002/05/02 by jacarey@fl_jacarey

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```
Change 25917 on 2002/05/01 by mkelly@fl_mkelly_r400_win_laptop
Update
Change 25912 on 2002/05/01 by nbarbier@nbarbier\_r400\_win\_tor
Made changes following test plan review for first milestone.
Change 25896 on 2002/05/01 by lkang@lkang r400 win tor
update on 5/1
Change 25850 on 2002/05/01 by jayw@MA_JAYW
Only Gamma monotinicity left.
Change 25824 on 2002/05/01 by jacarey@fl jacarey
Update signal names for the memory hub power management.
Change 25816 on 2002/05/01 by jhoule@MA JHOULE
0.9.9-0.9.10:
Inserted complete size restriction from .xls file.
Wrapping/Clamping description.
TP->TC interface suggestion.
Change 25806 on 2002/05/01 by jacarey@fl_jacarey
Update
Change 25805 on 2002/05/01 by gregs@gregs_r400\_win\_marlboro
added another open issue.
Change 25804 on 2002/05/01 by jacarey@fl jacarey
Micro Engine Details
Change 25802 on 2002/05/01 by gregs@gregs_r400_win_marlboro
added another ROM: Y25LF05
Change 25778 on 2002/05/01 by jacarey@fl jacarey
Renamed MH_CP_coherency_busy to MH_RBBM_coherency_busy
```

Change 25772 on 2002/05/01 by jacarey@fl_jacarey Update Docuents with ME details. Change 25770 on 2002/05/01 by gregs@gregs r400 win marlboro added default value of MEM AP SIZE as an open issue. Change 25763 on 2002/05/01 by jacarey@fl jacarey Added RT Enable Flag Change 25719 on 2002/05/01 by gabarca@gabarca_crayola_win_cvd updated Change 25694 on 2002/05/01 by jacarey@fl_jacarey Checkpoint Code Change 25685 on 2002/05/01 by gregs@gregs r400 win marlboro added comments on TMDS pwr/gnd requirements. Change 25652 on 2002/04/30 by jayw@MA JAYW minor update in progress Change 25629 on 2002/04/30 by jacarey@fl_jacarey Update Micro Engine Local Addresses Change 25628 on 2002/04/30 by jacarey@fl jacarey Details to Micro Engine Local Addresses for Micro Engine Change 25624 on 2002/04/30 by scroce@scroce_r400_win_marlboro added PLI info Change 25622 on 2002/04/30 by gabarca@gabarca_crayola_win_cvd updated Change 25596 on 2002/04/30 by hartogs@fl hartogs Version 0.93

Added conversion method "VGT_GRP_FIX_1_23_TO_FLOAT" to the list of specifiable conversion methods in the register VGT_GROUP_VECT_0_FMT_CNTL. This conversion method is, at the time of this revision, used solely by the tessellation engine to convert interpolation weights from fixed point 1.23 format to 32-bit IEEE floating point.

Added "RETAIN_ORDER" and "RETAIN_QUADS" fields to the register VGT_GROUP_PRIM_TYPE.

Added description of how the prim type information flows through the VGT to section 5.2.1.

Change 25586 on 2002/04/30 by efong@efong_r400_win_tor_doc

updated with crtc_en signal

Change 25581 on 2002/04/30 by ashishs@fl_ashishs_r400_win

update

Change 25570 on 2002/04/30 by ashishs@fl_ashishs_r400_win

update

Change 25561 on 2002/04/30 by ashishs@fl_ashishs_r400_win

update

Change 25558 on 2002/04/30 by gabarca@gabarca_crayola_win_cvd

Finished establishing features and sub-features to be tested, developed the VGA HDP section, almost finished the VGA HDP test table spreadsheet

Change 25550 on 2002/04/30 by jacarey@fl_jacarey

Checkpoint Micro Engine Documentation

Change 25547 on 2002/04/30 by lkang@lkang_r400_win_tor

update on 4/30

Change 25540 on 2002/04/30 by ashishs@fl_ashishs_r400_win

update

Change 25521 on 2002/04/30 by ashishs@fl_ashishs_r400_win

update

Change 25508 on 2002/04/30 by jacarey@fl_jacarey

Update for Local Micro Engine Addresses

```
Change 25458 on 2002/04/29 by gabarca@gabarca_crayola_win_cvd
updated
Change 25457 on 2002/04/29 by gabarca@gabarca_crayola_win_cvd
updated
Change 25450 on 2002/04/29 by csampayo@fl csampayo r400
Update status for the following VGT test
r400vgt_index_size_01
Change 25418 on 2002/04/29 by sbagshaw@sbagshaw
VIP status for chip integration as of April 23rd, 2002
Change 25415 on 2002/04/29 by jayw@MA JAYW
must run
Change 25413 on 2002/04/29 by jacarey@fl jacarey
Checkpoint Specifications
Change 25386 on 2002/04/29 by jasif@jasif_r400_win_tor
Updated forcible signals section to use prefix "force" for all forcible signal names.
Change 25372 on 2002/04/29 by gabarca@gabarca_crayola_win_cvd
updated
Change 25354 on 2002/04/29 by lkang@lkang r400 win tor
update on 4/29
Change 25346 on 2002/04/29 by fhsien@fhsien r400 win marlboro
Only change the format of the template for RB verification
Change 25339 on 2002/04/29 by jasif@jasif\_r400\_win\_tor
Updated
Change 25335 on 2002/04/29 by rbell@rbell_crayola_win_cvd
```

```
updated
Change 25334 on 2002/04/29 by gabarca@gabarca_crayola_win_cvd
Put in VGA HDP
Change 25326 on 2002/04/29 by nluu@nluu r400 doclib cnnb
- update
Change 25324 on 2002/04/29 by mmantor@mmantor_r400_win
updated spec for PA_SC_su interface changes
updated sc.v and created tb directories
Change 25305 on 2002/04/29 by efong@efong r400 win tor doc
Updated
Change 25304 on 2002/04/29 by chwang@chwang_doc_r400_win_cvd
Update.
Change 25303 on 2002/04/29 by askende@andi_r400_docs
modifications to RB-SX interfaces
Change 25296 on 2002/04/29 by omesh@ma omesh
Just changed the heading/title of document. Nothing else.
Change 25295 on 2002/04/29 by gabarca@gabarca crayola win cvd
Cahnged name
Change 25280 on 2002/04/29 by jacarey@fl_jacarey
No special logic in the RBBM for detecting IDCT register transactions. Any logic needed
will be in the CP's micro engine.
Change 25278 on 2002/04/29 by gabarca@gabarca_crayola_win_cvd
Cahnged name
Change 25277 on 2002/04/29 by tho@tho r400 win
```

updated

```
Change 25275 on 2002/04/29 by gabarca@gabarca_crayola_win_cvd
Update
Change 25273 on 2002/04/29 by vliu@vliu r400 cnvliu100 win cvd
Update
Change 25268 on 2002/04/29 by jacarey@fl jacarey
Update Pre-Fetch Parser
Change 25197 on 2002/04/26 by csampayo@fl_csampayo_lt_r400
Added status for the following tests:
r400vgt index offset 01
r400vgt_index_offset_02
r400vgt index offset 03
Change 25193 on 2002/04/26 by csampayo@fl_csampayo_lt_r400
Resubmit previous
Change 25192 on 2002/04/26 by csampayo@fl_csampayo_lt_r400
Added index offset to VGT section
Change 25187 on 2002/04/26 by mkelly@fl mkelly r400 win laptop
Update...
Change 25148 on 2002/04/26 by ashishs@fl ashishs r400 win
just checked out
Change 25145 on 2002/04/26 by ashishs@fl_ashishs_r400_win
update
Change 25135 on 2002/04/26 by scroce@scroce_r400_win_marlboro
Added some new features and modified some current features
Change 25134 on 2002/04/26 by jayw@MA_JAYW
minor tweak to the exponent table, adding one to exponent
added +1.0 bybass in front of degamma.
```

1. Remove GEN_INT_* references 2. No Shared Registers -- Update read return bus 3. Added MASTER_INT_SIGNAL register Change 25075 on 2002/04/26 by jacarey@fl jacarey Update Documents Change 25056 on 2002/04/25 by gregs@gregs_r400_win_marlboro update Change 25055 on 2002/04/25 by $gregs@gregs_r400_win_marlboro$ updated number of analog sipply pins + descriptions. Change 25046 on 2002/04/25 by jayw@MA JAYW added MS gamma blech Change 25020 on 2002/04/25 by $ashishs@fl_ashishs_r400_win$ update Change 25014 on 2002/04/25 by ashishs@fl_ashishs_r400_win update Change 24968 on 2002/04/25 by georgev@ma_georgev First Rev. Change 24961 on 2002/04/25 by ctaylor@fl ctaylor r400 win marlboro Spec Updates Change 24941 on 2002/04/25 by jayw@MA JAYW fixed a missing zero in DeGamma example and improved formatting of the result. Change 24919 on 2002/04/25 by rherrick@ma_rherrick_crayola Updated spec to reflect two Texture Cache interface clients

Change 24910 on 2002/04/25 by csampayo@fl_csampayo_r400

Change 25105 on 2002/04/26 by jacarey@fl_jacarey

```
Updated the schedule and the status for the following tests:
r400vgt_index_min_max_01
r400vgt_index_min_max_02
Change 24905 on 2002/04/25 by jacarey@fl jacarey
Fixed typo of force mismatch
Change 24904 on 2002/04/25 by lkang@lkang r400 win tor
update on 4/24
Change 24902 on 2002/04/25 by lkang@lkang_r400_win_tor
update on 4/24
Change 24901 on 2002/04/25 by lkang@lkang_r400_win_tor
update after spec review
Change 24899 on 2002/04/25 by rherrick@ma rherrick crayola
Improve documentation to reflect implementation (including data-spec definition)
Change 24888 on 2002/04/25 by jayw@jayw r400 win home
Added example of DeGamma to blend doc and
added exponent table documentation
Change 24832 on 2002/04/24 by bryans@bryans_crayola_doc
Added general flow diagrams (more to come)
Change 24827 on 2002/04/24 by jayw@MA JAYW
Added graph around DEBUGX
Change 24822 on 2002/04/24 by jayw@MA_JAYW
made debugging a particular x easier
Change 24810 on 2002/04/24 by jayw@MA_JAYW
added debug lines at the end
Change 24807 on 2002/04/24 by jayw@MA JAYW
fixed with no implicit leading one and exponent
```

```
bias of +15 as per Paul Vella's request.
Change 24796 on 2002/04/24 by gregs@gregs\_r400\_win\_marlboro
SPLL registers update.
Change 24713 on 2002/04/24 by georgev@ma georgev
Opened for edit.
Change 24712 on 2002/04/24 by smoss@smoss_crayola_win
updated su tests
Change 24707 on 2002/04/24 by bryans@bryans_crayola_doc
Update directory tree (parts_lib) for virage/testchip_vid subdirs
Change 24676 on 2002/04/24 by jacarey@fl_jacarey
Added Read Request Ports to the MIU
Change 24675 on 2002/04/24 by jacarey@fl jacarey
Powerpoint slides from 2D PM4 Review
Change 24674 on 2002/04/24 by jacarey@fl_jacarey
Checkpoint All Documents.
Change 24673 on 2002/04/24 by jayw@jayw_r400_win_home
missing files added
Change 24639 on 2002/04/23 by csampayo@fl csampayo lt r400
Updated status for the following tests:
r400vgt_reuse_depth_triangle_list_01
r400vgt_reuse_depth_line_list_01
Change 24615 on 2002/04/23 by jimmylau@jimmylau_r400_win_tor
move CRTC test plan documents under doc_lib/design/blocks/dc/crtc
Change 24604 on 2002/04/23 by gregs@gregs\_r400\_win\_marlboro
update
```

```
Change 24574 on 2002/04/23 by rbagley@ma_rbagley_ltxp
Some updates (far from complete) to the syntax. More important, the doc is reorganized.
Change 24542 on 2002/04/23 by lkang@lkang r400 win tor
update on 4/23
Change 24540 on 2002/04/23 by tien@ma spinach
Updated TP area estimate
Change 24536 on 2002/04/23 by lkang@lkang_r400_win_tor
update on 4/23
Change 24519 on 2002/04/23 by jayw@MA_JAYW
changed tag between MC and RB to 9 bits.
Change 24516 on 2002/04/23 by jayw@MA JAYW
fixed perl bug, more usefull X's found now.
Change 24489 on 2002/04/23 by jimmylau@jimmylau r400 win tor
Add crtc_en signal in the SCL-CRTC interface specs.
Change 24484 on 2002/04/23 by frising@ma_frising
24 bit floating point format is E4M20 not E5M19. No version bump.
Change 24462 on 2002/04/23 by nbarbier@nbarbier r400 win tor
Initial Revision.
Change 24445 on 2002/04/23 by jacarey@fl jacarey
Misc. Updates to 2D Appendix
Reset "Valid" flags on 3D-to-2D Transitions in PFP.
Change 24416 on 2002/04/22 by csampayo@fl_csampayo_r400
Updated status for the test
r400vgt_reuse_depth_point_list_01
Change 24406 on 2002/04/22 by bryans@bryans_crayola_doc
```

```
Update per status meeting
Change 24387 on 2002/04/22 by mmantor@mmantor\_r400\_win
update to sc dumps and added last tile to walker out dump in sc walker. Also updated
the standslone exe and the scan converter spec for the new sc=>sq interface
Change 24385 on 2002/04/22 by gregs@gregs\_r400\_win\_marlboro
update
Change 24353 on 2002/04/22 by lkang@lkang_r400_win_tor
vga integration
Change 24352 on 2002/04/22 by lkang@lkang r400 win tor
display integration plan
Change 24266 on 2002/04/22 by chwang@chwang_doc_r400_win_cvd
Addition of BIF Model test plan.
Change 24243 on 2002/04/22 by gabarca@gabarca_crayola_win_cvd
VGAREG_VGA_MEMORY_BASE_ADDRESS [31:25]Represents the start of the 32 Meg aligned, 32
Meg sized area of memory where the VGA HDP and rendering reads and writes.
Change 24234 on 2002/04/22 by chwang@chwang_doc_r400_win_cvd
Updated with some implementation details.
Change 24230 on 2002/04/22 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 24218 on 2002/04/22 by jasif@jasif r400 win tor
Updated.
Change 24209 on 2002/04/22 by efong@efong_r400_win_tor_doc
Updated
Change 24195 on 2002/04/22 by chwang@chwang doc r400 win cvd
Update.
```

```
Change 24191 on 2002/04/22 by tho@tho_r400_win
updated
Change 24187 on 2002/04/22 by imuskatb@imuskatb_r400_win_cnimuskatb
       Updated
Change 24173 on 2002/04/22 by rbell@rbell crayola win cvd
updated
Change 24170 on 2002/04/22 by gregs@gregs_r400_win_marlboro
removed ROM sram area, as we are not going to have any memory in ROM.
Change 24082 on 2002/04/19 by csampayo@fl_csampayo_r400
Updated status for following tests
r400vgt_reuse_index_triangle_list_01
r400vgt reuse index line list 01
r400vgt_reuse_index_point_list_01
Change 24050 on 2002/04/19 by jacarey@fl_jacarey
Remove constant flag from MIU logic.
Change 24049 on 2002/04/19 by pmitchel@pmitchel r400 win marlboro
add
Change 24024 on 2002/04/19 by jacarey@fl jacarey
PM4 Spec Updates for Write Confirmation
Microcode Updates for write confirmation.
Change 24008 on 2002/04/19 by gregs@gregs r400 win marlboro
update.
Change 23984 on 2002/04/19 by georgev@ma_georgev
Master and sub documents for verification plan
Change 23961 on 2002/04/19 by smoss@smoss crayola win
added culling
```

```
Change 23958 on 2002/04/19 by bryans@bryans crayola doc
Add macros:
CHIP EMU ARCHS CONFS
CHIP SIM ARCHS CONFS
<test> emu archs confs
<test>_sim_archs_confs
to support specifying pairs of arch/conf within the Makefile.
Note: CHIPARCH= and CHIPCONF= can be used on the command line to override
Change 23957 on 2002/04/19 by llefebvr@llefebvre_laptop_r400
The new control flow scheme is now included in v2.0 of the sequencer spec.
Change 23946 on 2002/04/19 by llefebvr@llefebvre laptop r400
Last version of the spec with the old control flow scheme
Change 23940 on 2002/04/19 by jacarey@fl jacarey
Updated signal name to CP_CG_2d_mode.
Change 23939 on 2002/04/19 by jacarey@fl_jacarey
Added CG CP 2d mode to real-time stream connections document.
Change 23926 on 2002/04/19 by mkelly@fl_mkelly_r400_win_laptop
Update
Change 23893 on 2002/04/18 by csampayo@fl csampayo r400
Updated status for following tests:
r400vgt ext2int index line loop 01
r400vgt_ext2int_index_triangle_strip_01
r400vgt ext2int index quad strip 01
r400vgt_ext2int_index_triangle_fan_01
r400vgt_ext2int_index_quad_list_01
r400vgt_ext2int_index_polygon_01
r400vgt_ext2int_index_triangle_list_01
Change 23851 on 2002/04/18 by gabarca@gabarca crayola win cvd
```

Added working version of VGA test plan:

```
Change 23836 on 2002/04/18 by jacarey@fl jacarey
1. Add TBD to RBBM spec for interrupts
2. Update packets for "write confirmation"
Change 23835 on 2002/04/18 by mkelly@fl_mkelly_r400\_win_laptop
Update
Change 23767 on 2002/04/18 by jacarey@fl jacarey
Update Connections to MIU
Change 23726 on 2002/04/17 by csampayo@fl_csampayo_r400
Updated status for the following tests:
r400vgt_ext2int_index_points_01
r400vgt ext2int index line list 01
r400vgt ext2int index line strip 01
Change 23722 on 2002/04/17 by askende@andi r400 docs
new rev. 03 checked in.
Change 23718 on 2002/04/17 by abeaudin@abeaudin r400 win marlboro
update transaction engine
Change 23714 on 2002/04/17 by vromaker@MA_VIC_P4
updated SQ memory sizes
Change 23661 on 2002/04/17 by efong@efong_r400_win_tor_doc
changed from VGA_DISP_d1_rotate_90_deg to VGA_DISP_d2_rotate_90_deg
Change 23635 on 2002/04/17 by efong@efong r400 win tor doc
Updated due to review as well as new pin (CRTC SCL display read request dis)
Change 23617 on 2002/04/17 by jacarey@fl_jacarey
Checkpoint Micro Engine Diagrams
Microcode includes the main loop (Packet Dispatch)
Change 23597 on 2002/04/17 by gregs@gregs r400 win marlboro
updated register fields.
```

```
Change 23590 on 2002/04/17 by jayw@MA_JAYW
MaxErr, better error range checking with quatization effects.
Change 23573 on 2002/04/17 by efong@efong r400 win tor doc
Updated due to review as well as new spec still have to update the reify file stuff
Change 23566 on 2002/04/17 by gregs@gregs r400 win marlboro
updated MEM_AP_SIZE encodings + strap readback table.
Change 23535 on 2002/04/16 by csampayo@fl_csampayo_r400
Updated r400vgt provoking vtx all 01 test status
Change 23529 on 2002/04/16 by jacarey@fl jacarey
Checkpoint Microcode -- A lot of Updates
Change 23525 on 2002/04/16 by smoss@smoss crayola win
updated su stuff
Change 23395 on 2002/04/15 by whui@whui_r400_win_tor
Update open issue
Change 23370 on 2002/04/15 by jacarey@fl_jacarey
Baseline Micro Engine Address Map
Check-Point Microcode
ME INIT packet for PM4 Spec
Register Updates for Cp Spec
Change 23345 on 2002/04/15 by mkelly@fl mkelly r400 win laptop
Update
Change 23309 on 2002/04/15 by jacarey@fl_jacarey
Update FIFO sizes and fix placement of the "rcd" signal.
Change 23307 on 2002/04/15 by jacarey@fl jacarey
Document ati_rbbm_intf usage in cp's rbiu
```

```
Change 23302 on 2002/04/15 by efong@efong_r400_win_tor_doc
Update the date
Change 23300 on 2002/04/15 by imuskatb@imuskatb r400 win cnimuskatb
updated
Change 23296 on 2002/04/15 by jasif@jasif r400 win tor
Updated.
Change 23289 on 2002/04/15 by chwang@chwang_doc_r400_win_cvd
Update.
Change 23287 on 2002/04/15 by dwong@cndwong2
xDCT test plan version 0.1
Only sections 3 (3.1..3.3) and 7 (7.2) contain valid information
Change 23282 on 2002/04/15 by nluu@nluu_r400_doclib_cnnb
- update
Change 23262 on 2002/04/15 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 23259 on 2002/04/15 by tho@tho_r400_win
  updated
Change 23242 on 2002/04/15 by efong@efong_r400_win_tor_doc
Updated
Change 23237 on 2002/04/15 by gregs@gregs_r400_win_marlboro
update.
Change 23234 on 2002/04/15 by gregs@gregs_r400_win_marlboro
added table of strap output signals
Change 23233 on 2002/04/15 by rbell@rbell_crayola_win_cvd
```

updated Change 23227 on 2002/04/15 by jacarey@fl_jacarey Details of Idle and Clean for wait until logic. Change 23203 on 2002/04/14 by jiezhou@jiezhou r400 win tor 1) Change icon read return data format (PO start from LSB) to keep the same format with R300. 2) Change cursor read return data format (PO start from LSB) Change 23188 on 2002/04/13 by jimmylau@jimmylau_r400_win_tor Initial test plan for CRTC Change 23164 on 2002/04/12 by lkang@lkang r400 win tor overall updating Change 23163 on 2002/04/12 by csampayo@fl csampayo r400 Added description of r400vgt_index_source_switch_01 Change 23124 on 2002/04/12 by gregs@gregs_r400_win_marlboro removed apad strength3 3V straps. Change 23112 on 2002/04/12 by khabbari@khabbari_r400_win frame controller changes reflecting the review Change 23075 on 2002/04/12 by jayw@MA JAYW Friday night check-in Change 23074 on 2002/04/12 by jayw@MA_JAYW Initial Gamma and DeGamma derivation code. Change 23038 on 2002/04/12 by grayc@grayc_r400_win described generic fifo

Change 23036 on 2002/04/12 by mkelly@fl mkelly r400 win laptop

Update

```
Change 22989 on 2002/04/12 by gregs@gregs_r400_win_marlboro
1. added registers for fuse box for "bad pipes"
2. added support for new devices: W45B512, W45B012
Change 22966 on 2002/04/11 by jiezhou@jiezhou r400 win tor
no changing
Change 22965 on 2002/04/11 by jiezhou@jiezhou_r400_win_tor
Update sub-block
       "graphic and overlay alpha blending" -> include GRPH_EN and OVL_EN control
       "Window Controller" -> Add more description of surface updating infomation
                              Updated state machine for graphic and overlay request
                              Remove "Y shift 1 bit" at 32 bpp digital output case and
                              overlay half resolution case
       Section 5.1 \rightarrow Add signal description of 1/8 of H-total from CRTC as we don't
have
                      interface spec of DCP-CRTC
       "LUT" -> update register name and autofill data value for 8-bit mode.
Change 22920 on 2002/04/11 by rbell@rbell crayola win cvd
Updates
Change 22919 on 2002/04/11 by jimmylau@jimmylau_r400_win_tor
Major update on CRTC specs :
  remove AUXWIN and related registers
  remove VGA timing and mode registers. Get signals from VGA block instead.
 major updates on register fields
 updates on CRTC interface signals and subblock interface signals
 major updates on section 6 : Data Processing Algorithms
Change 22903 on 2002/04/11 by gregs@gregs_r400_win_marlboro
typo error fixed.
Change 22894 on 2002/04/11 by mkelly@fl_mkelly_r400_win_laptop
update
Change 22890 on 2002/04/11 by gregs@gregs r400 win marlboro
added ROM straps and fuse box.
```

```
Change 22886 on 2002/04/11 by nbarbier@nbarbier_r400_win_tor
Updated signal names.
Change 22883 on 2002/04/11 by nbarbier@nbarbier_r400_win_tor
Initial revision.
Change 22878 on 2002/04/11 by jacarey@fl jacarey
Update addresses for incremental update tests for constants and instruction memory.
Change 22868 on 2002/04/11 by csampayo@fl_csampayo_r400
Added status of following tests:
r400su_parallel_orientation_all_01
r400su parallel orientation all 02
Change 22867 on 2002/04/11 by jacarey@fl_jacarey
Clear the VS and PS valid flags in the PFP if the driver
writes the shader instruction code directly.
Change 22866 on 2002/04/11 by semara@semara r400 win tor
adding the pixelwriter
Change 22843 on 2002/04/11 by rbell@rbell_crayola_win_cvd
Renamed doc file name
Change 22831 on 2002/04/11 by pmitchel@MA PAULM P4
move to proper place
Change 22818 on 2002/04/11 by georgev@MA YVALCOUR
Old version.
Change 22814 on 2002/04/11 by georgev@MA_YVALCOUR
Change property again.
Change 22805 on 2002/04/11 by georgev@MA YVALCOUR
```

Changed edit protection to lock.

```
Change 22800 on 2002/04/11 by gregs@gregs_r400_win_marlboro
minor corrections
Change 22799 on 2002/04/11 by gregs@gregs r400 win marlboro
removed the BUSY signals table.
Change 22761 on 2002/04/10 by csampayo@fl csampayo r400
Added status of the following tests:
r400vgt dma index points 01
r400vgt dma index line list 01
r400vgt_dma_index_line_strip_01
r400vgt_dma_index_line_loop_01
r400vgt immed index points 01
r400vgt_immed_index_line_list_01
r400vgt immed index line strip 01
r400vgt immed index line loop 01
Change 22755 on 2002/04/10 by jiezhou@jiezhou r400 win tor
Change
        "DxOVL MATRIX TRANSFORM EN"
         "DxOVL PWL TRANSFORM EN"
         "DxCOLOR SUBSAMPLE CRCB MODE[1:0]"
         "DxColor MATRIX TRANSFORM EN"
         from attribute of "double buffered" to "single buffered"
Add
         "DxGRPH_FLIP_MODE" to Graphic group
         "DxGRPH_ENABLE" to Graphic group
Move
         "DxOVL ENABLE" to Overlay group
Some change in LUT group:
              "DxGRPH_LUT_SEL" to Graphic group
     Move
     Change "DxLUT AUTOFILL" to "DC LUT AUTOFILL"
     Change "DC_LUT_MODE" to "DC_LUT_RW_MODE" with single buffered attribute
     Change "DC LUT READ'D WRITE SELECT" to "DC LUT RW SEL"
             "DC_LUT_INDEX[7:0]" to "DC_LUT_RW_INDEX[7:0]"
     Change
             "DC_LUT_WRITE_EN_MASK[5:0]" from "double buffered" to "single buffered"
     Change
Change 22709 on 2002/04/10 by llefebvr@llefebvre_laptop_r400
Control flow proposal updated
Change 22708 on 2002/04/10 by jacarey@fl jacarey
```

```
Remove mention of single ring mode for the instruction memory management.
Change 22700 on 2002/04/10 by jacarey@fl_jacarey
Removal of Dual Ring Mode for Instruction Memory
Change 22683 on 2002/04/10 by gregs@gregs r400 win marlboro
static screen update
Change 22680 on 2002/04/10 by georgev@MA_YVALCOUR
First revision
Change 22679 on 2002/04/10 by georgev@MA_YVALCOUR
No Change.
Change 22669 on 2002/04/10 by khabbari@khabbari_r400_win
frame controller for scaler released
Change 22628 on 2002/04/10 by jacarey@fl jacarey
Updates:
1. Synchronization
2. Performance Counters
Change 22594 on 2002/04/10 by bryans@bryans_crayola_doc
Update
Change 22589 on 2002/04/10 by jacarey@fl jacarey
Update to Specifications for Synchronization
Change 22577 on 2002/04/09 by beiwang@bei mcspec
Updated to reflect deletion of Address Return Bus and updates to RB bus interface
Change 22544 on 2002/04/09 by sallen@sallen_r400_win_marlboro
Move ferret and rename spec
Change 22510 on 2002/04/09 by mkelly@fl_mkelly_r400_win_laptop
Scissor rect tests...
```

```
Change 22507 on 2002/04/09 by khabbari@khabbari_r400_win
removed DCP_LB_P1_EN from lb/dcp interface
Change 22491 on 2002/04/09 by khabbari@khabbari r400 win
added subsample modes signal to both lb/dcp and lb/scl interface docs
Change 22483 on 2002/04/09 by hartogs@fl hartogs
Updated draw initiator comments for "INDEX_SIZE" and "SOURCE_SELECT" fields based on
behaviors learned from the emulator.
Change 22476 on 2002/04/09 by frising@ma_frising
v.1.37
-make surface alignment for 2d/3d linear textures be 4KB.
Change 22473 on 2002/04/09 by abeaudin@abeaudin r400 win marlboro
documentation for registers and the gfx transaction engine
Change 22450 on 2002/04/09 by georgev@MA YVALCOUR
First revision.
Change 22443 on 2002/04/09 by kcorrell@kcorrell_r400_docs_marlboro
Next update
Change 22393 on 2002/04/08 by khabbari@khabbari_r400_win
lb/scaler and lb/dcp interface update
Change 22359 on 2002/04/08 by jasif@jasif r400 win tor
Updated.
Change 22348 on 2002/04/08 by bryans@bryans crayola doc
Fix dc configuration to include VIP
Change 22319 on 2002/04/08 by bbloemer@ma-jasonh
Added DRAM bank pin names, separate from address pins.
Change 22317 on 2002/04/08 by mkelly@fl_mkelly_r400_win_laptop
```

```
Simple scissor rectangle test...
Change 22316 on 2002/04/08 by llefebvr@llefebvre_laptop_r400
The control flow proposal
Change 22313 on 2002/04/08 by jacarey@fl jacarey
Updates for synchronization
Change 22302 on 2002/04/08 by gregs@gregs_r400_win_marlboro
clock names
Change 22293 on 2002/04/08 by mkelly@fl_mkelly_r400_win_laptop
SC scissor rectangle test
Change 22291 on 2002/04/08 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 22281 on 2002/04/08 by gregs@gregs_r400\_win\_marlboro
clock names and spelling
Change 22277 on 2002/04/08 by jowang@jowang_R400_win
For first milestone
Change 22276 on 2002/04/08 by nluu@nluu_r400_doclib_cnnb
- update
Change 22275 on 2002/04/08 by jacarey@fl jacarey
Checkpoint Specifications
Change 22273 on 2002/04/08 by chwang@chwang_doc_r400_win_cvd
Update.
Change 22264 on 2002/04/08 by efong@efong_r400_win_tor_doc
Updated
Change 22261 on 2002/04/08 by tho@tho_r400_win
```

updated Change 22260 on 2002/04/08 by $gregs@gregs_r400_win_marlboro$ updated clock names Change 22259 on 2002/04/08 by imuskatb@imuskatb r400 win cnimuskatb updated Change 22253 on 2002/04/08 by abeaudin@abeaudin_r400_win_marlboro removed old schedules Change 22243 on 2002/04/08 by jasif@jasif_r400_win_tor Updated. Change 22241 on 2002/04/08 by jacarey@fl jacarey Updates to diagram. Change 22239 on 2002/04/08 by rbell@rbell crayola win cvd Small update for config example Change 22237 on 2002/04/08 by rbell@rbell_crayola_win_cvd updated Change 22231 on 2002/04/08 by jacarey@fl_jacarey 1. Update to PFP Pseudocode 2. Diagram for CP-to-Driver Synchronization 3. Checkpoint Microcode 4. Checkpoint RBBM Specification Change 22162 on 2002/04/05 by jiezhou@jiezhou_r400_win_tor update some field name to be consistent with verilog register file. Change 22152 on 2002/04/05 by mkelly@fl_mkelly_r400_win_laptop Update... Change 22149 on 2002/04/05 by jacarey@fl_jacarey

Small clarification for event timestamp write packet.

```
Change 22143 on 2002/04/05 by jacarey@fl_jacarey
Updated EVENT_TIMESTAMP_WRITE PM4 packet.
Updated count fields for PFP-to-ME intermediate packets.
Change 22135 on 2002/04/05 by chwang@chwang doc r400 win cvd
Minor update about model arguments.
Change 22130 on 2002/04/05 by chwang@chwang_doc_r400_win_cvd
Added updated Reify spec.
Change 22120 on 2002/04/05 by nluu@nluu_r400_doclib_cnnb
   - add more details to the implementation section
Change 22101 on 2002/04/05 by chwang@chwang doc r400 win cvd
Update to the Coding Standard.
Change 22094 on 2002/04/05 by jacarey@fl jacarey
Renamed CP RBBM rt idle to CP RBBM rt busy
Change 22079 on 2002/04/05 by lkang@lkang_r400_win_tor
display device power management update
Change 22078 on 2002/04/05 by semara@semara_r400_win_tor
adding VGA_DISP_d1/2_rotate_90_deg signals
Change 22068 on 2002/04/05 by semara@semara r400 win tor
Updating the interface to use display width/height to interface to the scalar.
adjust the vertical parameters indexes from [9:0] to [10:0].
Change 22067 on 2002/04/05 by jacarey@fl_jacarey
Remove Discrete signals for RT streams from CP Specification.
Change 22066 on 2002/04/05 by jacarey@fl_jacarey
Update to reflect "start of frame" counters for Display Engines.
Change 22065 on 2002/04/05 by jacarey@fl jacarey
```

```
Document for Discrete RT stream connections instead
of placing this information in the CP Specification.
Change 22056 on 2002/04/05 by llefebvr@llefebvre laptop r400
The new control flow proposal.
Change 22037 on 2002/04/05 by bryans@bryans crayola doc
Add dc_disp configuration
Change 21976 on 2002/04/04 by nluu@nluu_r400_doclib_cnnb
- add implementation specs to DCCIF Model.
Change 21973 on 2002/04/04 by csampayo@fl_csampayo_r400
Updated VGT section with tests written
Change 21964 on 2002/04/04 by gregs@gregs r400 win marlboro
update
Change 21919 on 2002/04/04 by nluu@nluu r400 doclib cnnb
- add bit width to signals in diagrams
Change 21906 on 2002/04/04 by nluu@nluu_r400_doclib\_cnnb
- mark don't cares on all relevant signals
Change 21904 on 2002/04/04 by khabbari@khabbari r400 win
the 1b test plan for phase1
Change 21894 on 2002/04/04 by jimmylau@jimmylau r400 win tor
Change SC-CRTC interface specs. Add signals to disable display requests for display1
and display2.
Change 21890 on 2002/04/04 by bryans@bryans_crayola_doc
Brief doc on environment variables and standard makefile defines
Change 21870 on 2002/04/04 by gregs@gregs r400 win marlboro
```

added input registers for RBBM active and MH active and pm en.

Change 21859 on 2002/04/04 by gregs@gregs_r400_win_marlboro moved ROM based straps table Change 21853 on 2002/04/04 by $gregs@gregs_r400_win_marlboro$ reset -> srst Change 21844 on 2002/04/04 by bhankins@fl bhankins r400 win Initial checkin Change 21831 on 2002/04/04 by gregs@gregs_r400_win_marlboro verilog examples of clock gating Change 21816 on 2002/04/04 by gregs@gregs r400 win marlboro sclk gating example files. Change 21798 on 2002/04/04 by jacarey@fl jacarey Miscellaneous Corrections to PM4 Specification. Change 21771 on 2002/04/03 by jiezhou@jiezhou_r400_win_tor small updating Change 21770 on 2002/04/03 by csampayo@fl_csampayo_r400 PA Validation Tests Tracking Document Change 21733 on 2002/04/03 by nluu@nluu r400 doclib cnnb - change title in properties Change 21719 on 2002/04/03 by nluu@nluu_r400_doclib_cnnb - add more test cases Change 21712 on 2002/04/03 by nluu@nluu_r400_doclib_cnnb - add a no-reset test case - change to revision 1.0

Change 21710 on 2002/04/03 by nluu@nluu_r400_doclib_cnnb

```
- Add implementation specs to rbbmif model doc
Change 21650 on 2002/04/03 by hartogs@fl_hartogs
changed VGT_SQ_end_of_vector to VGT_SQ_end_of_vtx_vect.
changed VGT_PA_clip_p_start_vector to VGT_PA_clip_p_new_vtx_vect.
fixed stride and shift entries for vector 0 in Major Mode 0 table.
Updated the "Active Issues" list.
Added the SWAP MODE field to the DMA SIZE register.
Changed the implied value of bit 2 of the VGT\_MH\_ad interface from a zero to a one.
This indicates that the VGT is always doing 256-bit requests.
Change 21638 on 2002/04/03 by jacarey@fl jacarey
Updated Invalidate_State packet to swap VS and PS bit order
Change 21634 on 2002/04/03 by abeaudin@abeaudin_r400_win_marlboro
cleaned up documentaion
Change 21620 on 2002/04/03 by jacarey@fl jacarey
Clarified that the MH has a slip FIFO
Change 21619 on 2002/04/03 by gregs@gregs r400 win marlboro
Updated MH section
Change 21589 on 2002/04/03 by jacarey@fl_jacarey
Added memclk active feedback to MIU.
Change 21586 on 2002/04/03 by jacarey@fl jacarey
Added CP MH reqmem signal to the CP.
Change 21533 on 2002/04/03 by jacarey@fl jacarey
Update to All Documents
Change 21517 on 2002/04/02 by csampayo@fl_csampayo_r400
For documenting PA validation environment/processes
Change 21492 on 2002/04/02 by kcorrell@kcorrell r400 docs marlboro
```

updated interfaces

```
Change 21467 on 2002/04/02 by bryans@bryans_crayola_doc
more updates (open issues)
Change 21423 on 2002/04/02 by jasif@jasif_r400_win_tor
Updated.
Change 21396 on 2002/04/02 by bryans@bryans crayola doc
Update status based on Lili's changes
Change 21382 on 2002/04/02 by efong@efong_r400_win_tor_doc
prefixed all the forciable signals with force_
Change 21381 on 2002/04/02 by efong@efong_r400_win_tor_doc
prefixed the forciable signals with force_.
Change 21380 on 2002/04/02 by efong@efong r400 win tor doc
changed the names of the forciable signals to be prefixed with force .
changed the bus_timeout to be 100 from 50 because rbbmif will timeout after 68 cycles.
fixed up the table with the commands and removed 0x200 from all the write cycles
put down some extra limitations of the model
put in a small section in the rd file section for timeout
Change 21377 on 2002/04/02 by jayw@MA_JAYW
added RB_MH_queuecount
and removed tile done from RBs.
Change 21366 on 2002/04/02 by jayw@MA JAYW
complement for RB_HW_design_spec.doc
area estimates, etc.
Change 21365 on 2002/04/02 by jayw@MA JAYW
MH_RB_queuecount_external is now MH_RB_queuecount
Change 21349 on 2002/04/02 by rbell@rbell_crayola_win_cvd
updated
Change 21345 on 2002/04/02 by jacarey@fl_jacarey
```

Interface Updates for CP. Change 21314 on 2002/04/01 by $jiezhou@jiezhou_r400_win_tor$ Initial release for dcp test plan Change 21308 on 2002/04/01 by bryans@bryans crayola doc Post status meeting update Change 21290 on 2002/04/01 by jasif@jasif_r400_win_tor Modified description of timing diagram. Change 21277 on 2002/04/01 by $gregs@gregs_r400_win_marlboro$ added pin_strap_DRAM_select Change 21253 on 2002/04/01 by lkang@lkang_r400 win_tor Move the file from devel/doc lib to doc lib Change 21251 on 2002/04/01 by jasif@jasif_r400_win_tor Updated unterface signal names to match released dccif.v top level. Change 21222 on 2002/04/01 by bryans@bryans_crayola_doc Update status Change 21216 on 2002/04/01 by jasif@jasif_r400_win_tor Added assumptions section. Change 21207 on 2002/04/01 by nluu@nluu r400 doclib cnnb - update status Change 21206 on 2002/04/01 by jasif@jasif r400 win tor Updated Error Section. Change 21204 on 2002/04/01 by efong@efong_r400_win_tor_doc Updated

Change 21201 on 2002/04/01 by jasif@jasif_r400_win_tor

```
Updated.
Change 21198 on 2002/04/01 by chwang@chwang_doc_r400_win_cvd
Update.
Change 21195 on 2002/04/01 by dclifton@dclifton r400
Moved perspective correction of I and J to VTE. Updated the RBIU interface to very
latest concept of state variable storage (subject to change again).
Change 21191 on 2002/04/01 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 21189 on 2002/04/01 by jasif@jasif r400 win tor
Updated
Change 21182 on 2002/04/01 by jayw@MA_JAYW
Monday morning checkin.
Some tile cache drawings in Visio.
Change 21177 on 2002/04/01 by tho@tho r400 win
   updated
Change 21161 on 2002/04/01 by rbell@rbell_crayola_win_cvd
updated
Change 21134 on 2002/03/31 by beiwang@bei mcspec
Deleted text descriptions on Address return bus to be consistent w/ the bus interface
tables
Change 21122 on 2002/03/31 by semara@semara_r400_win_tor
updating the address gen section
Change 20941 on 2002/03/28 by bbloemer@ma-jasonh
Updated dc queue text.
Change 20934 on 2002/03/28 by hartogs@fl hartogs
```

More clean-up. From this point on, revisions to the spec will be detailed in the

revision section. Change 20912 on 2002/03/28 by jacarey@fl_jacarey Added soft reset for VGT to RBBM. Multiple Updates to CP specs for 2D. Change 20890 on 2002/03/28 by rherrick@ma_rherrick_crayola Fixed Table Of Contents... Change 20883 on 2002/03/28 by gregs@gregs_r400_win_marlboro added block to block timing Change 20880 on 2002/03/28 by rherrick@ma rherrick crayola Revamped specification to include relative transaction methods (instead of directed vs pattern methods)... Also added client synchronization... Change 20861 on 2002/03/28 by rbell@rbell crayola win cvd updated Change 20859 on 2002/03/28 by whui@whui r400 win tor updated section 8: power management Change 20808 on 2002/03/28 by hartogs@fl_hartogs Added and deleted several state registers. Updated interface tables. Change 20799 on 2002/03/28 by jacarey@fl jacarey Added clock gating information to the CP Specification. Change 20769 on 2002/03/27 by mmantor@mmantor_r400_win updated for interface integration changes Change 20739 on 2002/03/27 by jasif@jasif_r400_win_tor Added force prefix for signal names forcible from tests. Change 20721 on 2002/03/27 by jayw@MA JAYW

removed bogus offset x and offset y from detail bus.

added event bit to coarse bus. Change 20720 on 2002/03/27 by nluu@nluu_r400_doclib_cnnb - initial revision of DCCIF Model test plan Change 20718 on 2002/03/27 by gregs@gregs r400 win marlboro Updated with the global core clock idea. Change 20715 on 2002/03/27 by nluu@nluu_r400_doclib_cnnb - correct links - model documents were re-organized Change 20711 on 2002/03/27 by bryans@bryans_crayola_doc $\label{the conf} \mbox{Update the arch/conf spec for simulation} \\$ Change 20710 on 2002/03/27 by jacarey@fl_jacarey Update RBBM Interfaces Change 20699 on 2002/03/27 by jacarey@fl jacarey Update Spec for Interfaces Change 20692 on 2002/03/27 by jayw@MA_JAYW fixed a couple of minor signal names. Change 20678 on 2002/03/27 by askende@andi_r400_docs a new rev of the shader export spec. Change 20664 on 2002/03/27 by jacarey@fl jacarey Interface Updates Change 20641 on 2002/03/27 by jacarey@fl jacarey Added "Read Combine Disable" to diagrams. Change 20632 on 2002/03/27 by dglen@dglen_r400_dell Doing major update. Still not complete.

Change 20606 on 2002/03/26 by rvelez@rvelez_r400_win_tor

Latest DCCIF changes - fixed typos in docs Change 20601 on 2002/03/26 by jacarey@fl_jacarey Update CP Interfaces Change 20589 on 2002/03/26 by khabbari@khabbari r400 win tvout/dispout interface doc released Change 20584 on 2002/03/26 by jacarey@fl_jacarey Sweeping Update to the Interface Signal List. Change 20580 on 2002/03/26 by jayw@MA_JAYW Missing file, disappeared mysteriously Change 20578 on 2002/03/26 by $jayw@MA_JAYW$ Released to match rb.v and rc.v Change 20574 on 2002/03/26 by jowang@jowang_R400_win Action Items 02/07 Change 20573 on 2002/03/26 by jayw@MA_JAYW Several bus name changes. Added RB->RC system context bus. Change 20571 on 2002/03/26 by mpersaud@mpersaud r400 win tor Changes for Feb 28 Design Review Change 20560 on 2002/03/26 by jacarey@fl_jacarey Interface Update for VIP, BIF reviews Change 20531 on 2002/03/26 by jasif@jasif_r400_win_tor Updated. Change 20524 on 2002/03/26 by nluu@nluu_r400_doclib_cnnb - update Change 20513 on 2002/03/26 by dwong@cndwong2

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R400 xDCT design review presentation material
Change 20512 on 2002/03/26 by jasif@jasif_r400_win_tor
Initial revision.
Change 20471 on 2002/03/26 by rthambim@rthambim\_r400\_win\_tor
Added skid buffer structure diagram.
Change 20444 on 2002/03/25 by rthambim@rthambim_r400_win_tor
Updated write combining info.
Change 20442 on 2002/03/25 by rthambim@rthambim r400 win tor
Added skid buffer timing diagram.
Change 20426 on 2002/03/25 by askende@andi_r400_docs
a new rev (0.2)
Change 20403 on 2002/03/25 by jacarey@fl_jacarey
Clarify the fix-to-float is not normalized.
Change 20375 on 2002/03/25 by jayw@MA JAYW
Weekend updates
Change 20364 on 2002/03/25 by jiezhou@jiezhou r400 win tor
small updating
Change 20357 on 2002/03/25 by semara@semara_r400_win_tor
rev 0.6
Change 20347 on 2002/03/25 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 20339 on 2002/03/25 by jacarey@fl_jacarey
Checkpoint Diagram and Micro Code.
Change 20335 on 2002/03/25 by efong@efong r400 win tor doc
```

```
updated
Change 20332 on 2002/03/25 by chwang@chwang_doc_r400_win_cvd
Update.
Change 20320 on 2002/03/25 by llefebvr@llefebvre_laptop_r400
Upated the interfaces and added an exporting rule section.
Change 20316 on 2002/03/25 by nluu@nluu_r400_doclib_cnnb
- update
Change 20313 on 2002/03/25 by jasif@jasif r400 win tor
Updated.
Change 20309 on 2002/03/25 by tho@tho_r400_win
   updated
Change 20308 on 2002/03/25 by rbell@rbell_crayola_win_cvd
updates
Change 20303 on 2002/03/25 by nluu@nluu r400 doclib cnnb
- update
Change 20302 on 2002/03/25 by imuskatb@imuskatb dv win cvd
update
Change 20294 on 2002/03/25 by jiezhou@jiezhou_r400_win_tor
combine DCP_Controller.doc into Display_Composite_Pipe.doc
Change 20293 on 2002/03/25 by rbell@rbell_crayola_win_cvd
changes
Change 20292 on 2002/03/25 by jiezhou@jiezhou_r400_win_tor
update
```

Change 20291 on 2002/03/25 by jiezhou@jiezhou r400 win tor

major release to support architecture change:

- 1) add graphic/overlay alpha blending feature
- 2) add overlay matrix transformation block
- 3) add overlay gamma correction block
- 4) add 512 offset to icon expander
- 5) add 512 offset to cursor expander
- 6) add "pick-up" odd pixels in Sub-sampline block
- 7) some precision issues along the data path
- 8) remove supporting for liear mode
- 9) remove supporting for one pipe enabled at tiled-mode
- 10) combine DCP_Controller.doc into Display_Composite_Pipe.doc
- 11) DCP_register_list.doc separate from Display_Composite_Pipe.doc

Change 20289 on 2002/03/25 by jacarey@fl jacarey

clarified the brush offset value format

Change 20288 on 2002/03/25 by jacarey@fl_jacarey

Update cp_interrupt packet to help the micro engine design.

Change 20287 on 2002/03/25 by jacarey@fl jacarey

Fix Typos in the number formats

Change 20286 on 2002/03/25 by jacarey@fl_jacarey

Clarification on Packet Restrictions

Change 20269 on 2002/03/24 by rthambim@rthambim r400 win tor

Updated ROM cycle info.

Change 20268 on 2002/03/24 by rthambim@rthambim_r400_win_tor

Updated write combining info.

Change 20267 on 2002/03/24 by $rthambim@rthambim_r400_win_tor$

Fixed syntax.

Change 20237 on 2002/03/22 by jiezhou@jiezhou_r400_win_tor

Major update for DCP register list

Change 20234 on 2002/03/22 by $rthambim@rthambim_r400_win_tor$

```
Included strap table, updated review feedback.
Change 20219 on 2002/03/22 by askende@andi_r400_docs
first cut of the document
Change 20215 on 2002/03/22 by jacarey@fl_jacarey
Update Interface list
Change 20199 on 2002/03/22 by llefebvr@llefebvre_laptop_r400
Some minor changes to the SQ interfaces.
Change 20194 on 2002/03/22 by jacarey@fl jacarey
Update Interfaces
Change 20192 on 2002/03/22 by mzhu@mzhu\_r400\_win\_tor
remove support for single DCP pipeline
Change 20189 on 2002/03/22 by gregs@gregs_r400_win_marlboro
things copied from r300 and not yet modified - in red color.
Change 20187 on 2002/03/22 by gregs@gregs r400 win marlboro
Initial version - notes on pins, pad sizes, die and package sizes.
Change 20157 on 2002/03/22 by jacarey@fl jacarey
Baseline CP Microcode
Typos in PM4 Spec
Change 20144 on 2002/03/22 by frising@ma frising
No version change.
-added in bit field definitions for texture width/height/depth that we keep forgetting
to add :)
Change 20142 on 2002/03/22 by mmantor@mmantor_r400_win
updated interface tables to represent actual planned hardware interfaces
Change 20131 on 2002/03/22 by dclifton@dclifton r400
```

```
Updated drawings and interface to Scan Converter
Change 20130 on 2002/03/22 by jacarey@fl_jacarey
Miscellaneous corrections to references to VGT registers
Change 20129 on 2002/03/22 by jacarey@fl jacarey
Rename vtg index offset to vgt indx offset
Change 20124 on 2002/03/22 by jowang@jowang_R400_win
added signals which are passed upstream from CRTC
Change 20114 on 2002/03/22 by jayw@MA_JAYW
Largely formatting.
Revamped MC interface and added RBBM.
Change 20102 on 2002/03/22 by jacarey@fl_jacarey
Update Draw Indx and Viz Query Pseudocode.
Change 20098 on 2002/03/22 by jhoule@MA JHOULE
1.36:
Changed DST_SEL_* names from XYZW to SRC_X, SRC_Y, SRC_Z, and SRC_W.
Equivalent in SRC_SEL* to GRP_X, GPR_Y, and GPR_W.
Consistent capitalized first letter in fields.
Enable/Disable FORCE_BC_W_TO_MAX now Enabled/Disabled.
Change 20097 on 2002/03/22 by gregs@gregs r400 win marlboro
minor mod.
Change 20094 on 2002/03/22 by jowang@jowang R400 win
reviewed and corrected description
Change 20092 on 2002/03/22 by jhoule@MA_JHOULE
Rev 0.9.8:
Updated SQ and SP interface from respective specs.
Change 20086 on 2002/03/22 by gregs@gregs_r400\_win\_marlboro
Updated memory interface.
```

```
Change 20058 on 2002/03/21 by abeaudin@abeaudin_r400_win_marlboro
new emulator documentation for adding blocks
Change 20018 on 2002/03/21 by jacarey@fl jacarey
Clarifications on Set state usage.
2D Updates.
Change 20015 on 2002/03/21 by jacarey@fl jacarey
Removed Erroneous Note
Change 19995 on 2002/03/21 by bryans@bryans_crayola_doc
updated
Change 19979 on 2002/03/21 by bryans@bryans crayola doc
Realign goals
Change 19960 on 2002/03/21 by jacarey@fl jacarey
Clarification of CO and C1 constant loading from CP for 2D
Change 19914 on 2002/03/21 by rherrick@ma_rherrick_crayola
First Release for general consumption/review... Changes include:
More completed requirements documentation (in the form of Configuration Spec File
Documentation)
Configuration File in a loose BNF format
Change 19865 on 2002/03/20 by nbarbier@nbarbier r400 win tor
Initial Release
Change 19858 on 2002/03/20 by efong@efong r400 win tor doc
Updated with new BIF-VGA requirements
Change 19843 on 2002/03/20 by abeaudin@abeaudin_r400_win_marlboro
new documentation for emulator
Change 19820 on 2002/03/20 by jacarey@fl_jacarey
```

Updated Registers Per .blk file and Emulator Change 19728 on 2002/03/20 by $gregs@gregs_r400_win_marlboro$ Initial version - copied (and re-arranged) from R300. Change 19718 on 2002/03/20 by jacarey@fl jacarey Fix equation for load constant context packet. Change 19705 on 2002/03/20 by efong@efong_r400_win_tor_doc Updated revision stuff Change 19704 on 2002/03/20 by efong@efong_r400_win_tor_doc removed all the power stuff. Change 19656 on 2002/03/19 by jacarey@fl jacarey Clarification for auto-generation of indices. Change 19650 on 2002/03/19 by jacarey@fl jacarey Update to 2D Register Definitions. Change 19631 on 2002/03/19 by jacarey@fl_jacarey Update interface signals to RCIU. Change 19629 on 2002/03/19 by jacarey@fl_jacarey Fix typos on interface signals from CP and HI. Change 19619 on 2002/03/19 by jacarey@fl jacarey Checkpoint Spec 1. PFP Constant coherency 2. Register Updates Change 19595 on 2002/03/19 by jacarey@fl_jacarey Update POLYLINE information. Update line brush processing. Change 19590 on 2002/03/19 by scroce@scroce r400 win marlboro

Updated Table of Contents

```
Change 19568 on 2002/03/19 by jacarey@fl_jacarey
Updated Brush_Offset plan for POLYLINE packet.
Change 19520 on 2002/03/18 by jiezhou@jiezhou_r400_win_tor
update
Change 19506 on 2002/03/18 by jiezhou@jiezhou r400 win tor
feature change to add alpha blending
Change 19503 on 2002/03/18 by llefebvr@llefebvre_laptop_r400
Changed the interfaces to reflect the fact that the PCs are now in the SX blocks
Change 19496 on 2002/03/18 by paulv@MA PVELLA
Minor update to MHS section, including the DBR block diagram.
Change 19492 on 2002/03/18 by fhsien@fhsien r400 win marlboro
del for yung
Change 19485 on 2002/03/18 by kcorrell@kcorrell_r400_docs_marlboro
added files describing how mh treats chips addresses, minor tweaks to text
Change 19482 on 2002/03/18 by jacarey@fl jacarey
Checkpoint CP Specification
* Partial Register Updates
        - BIOS Scratch Registers
         - Push Register Apertures
         - Updates to Register Text
Change 19478 on 2002/03/18 by jasif@jasif_r400_win_tor
Updated.
Change 19437 on 2002/03/18 by efong@efong_r400_win_tor_doc
Updated to new crtc spec. Also changed the DE to read_request
Change 19436 on 2002/03/18 by jacarey@fl_jacarey
Update Renderer Backend registers that are written by the CP
```

during the GUI Master Control handler. This is based on e-mail from Larry Seiler. Change 19424 on 2002/03/18 by vliu@vliu_r400_cnvliu100_win_cvd Update Change 19419 on 2002/03/18 by frising@ma_frising Initial check-in. Change 19417 on 2002/03/18 by efong@efong_r400_win_tor_doc Updated Change 19415 on 2002/03/18 by jimmylau@jimmylau r400 win tor Update interface signal list based on CRTC block specs. Change 19413 on 2002/03/18 by nluu@nluu_r400_doclib_cnnb - update Change 19409 on 2002/03/18 by chwang@chwang_doc_r400_win_cvd Update. Change 19406 on 2002/03/18 by jacarey@fl jacarey Update to wait_until conditions per e-mail from D. Glen on 1st and 2nd display/overlay controllers. Change 19405 on 2002/03/18 by jasif@jasif_r400_win_tor Updated. Change 19380 on 2002/03/18 by jacarey@fl jacarey Add INDEX OFFSET to the 3D Draw Packets. Change 19369 on 2002/03/18 by tho@tho_r400_win updated Change 19346 on 2002/03/17 by jacarey@fl jacarey

Illustration for 2D Surface Coherency

```
Change 19345 on 2002/03/17 by jacarey@fl jacarey
Updates from Reviews
Change 19240 on 2002/03/15 by rbell@rbell_crayola_win_cvd
updates
Change 19217 on 2002/03/15 by semara@semara r400 win tor
update
Change 19216 on 2002/03/15 by rherrick@ma_rherrick_crayola
More completion of first pass spec...
Change 19201 on 2002/03/15 by scroce@scroce_r400_win_marlboro
Added info about alias file creation
Change 19156 on 2002/03/15 by frising@ma frising
no version change
-fixed very minor typo on DATA_FORMAT page pointed out by Larry.
Change 19094 on 2002/03/15 by rherrick@ma_rherrick_crayola
More progress made... Still not complete... Redefined window setting directives...
Worked on first pass of Pattern Reads
Change 19057 on 2002/03/14 by lkang@lkang_r400_win_tor
updated section 6 on power state management
Change 19056 on 2002/03/14 by semara@semara_r400_win_tor
update section 10
Change 19051 on 2002/03/14 by frising@ma frising
v.1.35
-moved some fields around in texture constants to faciliate 2D.
-add per quad and per pixel register lod to texture instruction.
-moved SIGNED_RF_MODE_ALL up one bit in vertex instruction.
-cleaned up a few comments.
Change 19034 on 2002/03/14 by nbarbier@nbarbier\_r400\_win\_tor
```

Updated Interface Change 19002 on 2002/03/14 by $rherrick@ma_rherrick_crayola$ Yet another deposit along the way... Not ready for review yet... Change 18959 on 2002/03/14 by lseiler@ma lseiler Memory Formats: minor updates Change 18958 on 2002/03/14 by lseiler@ma_lseiler Render Backend minor updates Change 18909 on 2002/03/14 by lkang@lkang_r400_win_tor updated power management on pclk domain. Change 18875 on 2002/03/14 by rherrick@nashua_rherrick_crayola Progress on Spec.. No milestone... Change 18834 on 2002/03/13 by nluu@nluu r400 doclib cnnb - test plan for RBBMIF model Change 18697 on 2002/03/13 by nluu@nluu_r400_doclib_cnnb - correct comment about timeout and shared-registers Change 18690 on 2002/03/13 by rvelez@rvelez_r400_win_tor Top Level DC Spec Change 18682 on 2002/03/13 by scroce@scroce r400 win marlboro Quick comments Change 18669 on 2002/03/13 by jacarey@fl jacarey Baseline Overview Presentations Checkpoint PM4 Specification Change 18660 on 2002/03/13 by rherrick@ma_rherrick_crayola Documentation for MC/MH Test Environment

Change 18629 on 2002/03/12 by jasif@jasif r400 win tor

```
Updated arbitration between read and write requests. Added open issue of skid buffers.
Change 18616 on 2002/03/12 by nluu@nluu_r400_doclib_cnnb
- forgot to delete one doc in previous submit
Change 18607 on 2002/03/12 by khabbari@khabbari_r400_win
added fields to the register section of LB arch doc
Change 18594 on 2002/03/12 by nluu@nluu r400 doclib cnnb
   - re-org, rename files to all lowercase
Change 18582 on 2002/03/12 by efong@efong r400 win tor doc
forgot to change some of the names from HSYNC to HSYNCA/B and VSYNC to VSYNCA/B
Change 18564 on 2002/03/12 by khabbari@khabbari_r400_win
EOL removed from 1b dcp interface doc
Change 18552 on 2002/03/12 by jhoule@MA JHOULE
0.9.7:
Added mipmap packing scheme description (with images).
Moved Addressing in a Varia section.
Changed some sub-block names.
Change 18486 on 2002/03/11 by dglen@dglen_r400_dell
Major update for first time in far too long.
Change 18483 on 2002/03/11 by semara@semara r400 win tor
rev 0.3
Change 18457 on 2002/03/11 by bbloemer@ma-jasonh
Updated clock naming convention.
Change 18454 on 2002/03/11 by nluu@nluu_r400_doclib_cnnb
- Legacy => legacy
Change 18450 on 2002/03/11 by nluu@nluu_r400_doclib_cnnb
```

```
- re-organize model docs.
Change 18437 on 2002/03/11 by jacarey@fl_jacarey
Updated Surface Coherence Equations for Lines and Fix Problems
Change 18421 on 2002/03/11 by jacarey@fl jacarey
Miscellaneous Updates and Corrections
Change 18415 on 2002/03/11 by wlawless@wlawless
Revision 0.8 has updates to the color block cache, and its tag descriptions... Also a
RB full data flow diagram and description was added.
Change 18385 on 2002/03/11 by jasif@jasif r400 win tor
Updated
Change 18379 on 2002/03/11 by rbell@rbell_crayola_win_cvd
update
Change 18376 on 2002/03/11 by khabbari@khabbari_r400_win
added new signals to the lb_dcp interface doc
Change 18357 on 2002/03/11 by jimmylau@jimmylau r400 win tor
Finalize CRTC naming convention to CRTC1/CRTC2
Remove the notation of internal/external overscan in CRTC. Overscan width is
determined by scaler only.
Change the definition of ending timing parameters to be exclusive.
Add power management signals to CRTC-Scaler interface.
Change 18356 on 2002/03/11 by nluu@nluu_r400_doclib_cnnb
  - update
Change 18355 on 2002/03/11 by chwang@chwang_doc_r400_win_cvd
  Update
Change 18343 on 2002/03/11 by efong@efong_r400_win_tor_doc
Updated
```

Change 18342 on 2002/03/11 by tho@tho r400 win

update

Change 18341 on 2002/03/11 by rthambim@rthambim_r400_win_tor

Fixed syntax.

Change 18331 on 2002/03/11 by jacarey@fl_jacarey

R400 Memory Map Diagram

Change 18323 on 2002/03/11 by jacarey@fl_jacarey

Implicit Sync Only in CF Pipe

Change 18322 on 2002/03/11 by jacarey@fl jacarey

Updates from Comments

Update Surface Coherency Intersect Equation

Change 18320 on 2002/03/11 by jacarey@fl jacarey

CP Overview

Updates to RBBM Specification

Change 18318 on 2002/03/10 by rthambim@rthambim_r400_win_tor

Added skid buffer timing diagram.

Change 18317 on 2002/03/10 by $rthambim@rthambim_r400_win_tor$

Fixed naming convention in timing diagram.

Change 18308 on 2002/03/10 by rthambim@rthambim_r400_win_tor

Fixed the block diagram.

Change 18305 on 2002/03/10 by rthambim@rthambim_r400_win_tor

Added fifo info, fixed slave implementation diagram.

Change 18292 on 2002/03/09 by frising@ma_frising

v.1.34

-introduced arbitrary_filter field. A few other feilds had to be juggled in the process.

Change 18284 on 2002/03/08 by paulv@MA_PVELLA

```
Forgot to update table of contents, etc. Fixed.
Change 18283 on 2002/03/08 by paulv@MA_PVELLA
Updated MHS portion of spec with latest specifications/fixes, including block diagrams.
Change 18280 on 2002/03/08 by rthambim@rthambim_r400_win_tor
Initial revision.
Change 18263 on 2002/03/08 by jacarey@fl jacarey
Update RBBM Top-Level Diagram
Change 18240 on 2002/03/08 by rthambim@rthambim_r400_win_tor
Modified the RBBM-BIF timing diagram, address width, RBBMIF naming.
Change 18216 on 2002/03/08 by jacarey@fl_jacarey
Miscellaneous Corrections
Change 18211 on 2002/03/08 by jacarey@fl jacarey
Updates for Reviews
Change 18181 on 2002/03/08 by bryans@bryans crayola doc
Updated status with dccif change
Change 18152 on 2002/03/08 by jacarey@fl jacarey
Miscellaneous Updates
Change 18140 on 2002/03/08 by scroce@scroce_r400_win_marlboro
Updated for MKTREE changes
Change 18128 on 2002/03/08 by khabbari@khabbari_r400_win
small fix in line buffer arch
Change 18125 on 2002/03/08 by jacarey@fl_jacarey
Miscellaneous Updates
Change 18109 on 2002/03/08 by jacarey@fl jacarey
```

Updates Change 18094 on 2002/03/08 by mdoggett@MA_MDOGGETT_LT Update TCO section, figure and subblock descriptions. Updated TC top level figure. Added L1 Tag Index to L1 Tag. Change 18087 on 2002/03/08 by jacarey@fl jacarey Updates to Pre-Fetch Parser Diagram and Pseudocode. Change 18082 on 2002/03/08 by jacarey@fl_jacarey Update to CP Internal Packets Change 18077 on 2002/03/08 by jacarey@fl_jacarey Add Input Register Stage Change 18071 on 2002/03/08 by rvelez@rvelez r400 win tor DCCIF Architectural Spec Change 18055 on 2002/03/07 by khabbari@khabbari r400 win added interlace mode and supporting 2 pipe line for 20bpp Change 18041 on 2002/03/07 by jacarey@fl_jacarey Updates for Arbitration of Streams to Global register Bus. Change 18032 on 2002/03/07 by jacarey@fl jacarey Set State and Load Palette are 2D State Packets Change 18025 on 2002/03/07 by jacarey@fl jacarey

Change 17926 on 2002/03/07 by jacarey@fl_jacarey

Update to the CP_STAT register definition.

update of spec

Document that the Load_Palette packet may not be needed.

Change 17930 on 2002/03/07 by kcorrell@kcorrell_r400_docs_marlboro

Change 17924 on 2002/03/07 by bbloemer@ma-jasonh

Revised signal naming convention to allow for MKTREE-generated prefix. Also added clock nameing convention and removed convention for instantiating flip flops.

Change 17922 on 2002/03/07 by jacarey@fl_jacarey

Updates to CP <--> MH Interface

Change 17859 on 2002/03/07 by jacarey@fl jacarey

Update Queue Available Sizes
Update CP_STAT register definitions.

Change 17849 on 2002/03/07 by jacarey@fl_jacarey

Clarify Usage of Busy Signals Out of MIU

Change 17845 on 2002/03/07 by jasif@jasif_r400 win_tor

Changed busy signals to go to client instead of PLL model.

Change 17836 on 2002/03/07 by jasif@jasif_r400_win_tor

Changed request address to start from bit 31 instead of 29. Added separate client id's for read and write ack requests.

Change 17834 on 2002/03/07 by jasif@jasif r400 win tor

 $\label{lem:Added open issues: Arbitration between reads and writes, checking whether request address falls within surface information. \\$

Change 17824 on 2002/03/07 by jacarey@fl jacarey

Update Fetchers

Change 17822 on 2002/03/07 by jacarey@fl jacarey

Update Buses in MIU

Change 17820 on 2002/03/07 by jacarey@fl_jacarey

Separate Path Through PFP for Real-Time

Change 17773 on 2002/03/06 by jacarey@fl_jacarey

Checkpoint Spec

Change 17771 on 2002/03/06 by nluu@nluu_r400_doclib_cnnb

- forgot to change the path

Change 17770 on 2002/03/06 by nluu@nluu r400 doclib cnnb

- change Last Updated field to 'file save date' instead of current date

Change 17768 on 2002/03/06 by nluu@nluu r400 doclib cnnb

- title => filename in header section

Change 17767 on 2002/03/06 by nluu@nluu r400 doclib cnnb

- change Last Updated field to 'file save date' from 'current date'

Change 17766 on 2002/03/06 by nluu@nluu_r400_doclib_cnnb

- move rom controller model test plan to test plan subdirectory

Change 17762 on 2002/03/06 by nluu@nluu r400 doclib cnnb

- correct spelling and typos

Change 17760 on 2002/03/06 by nluu@nluu_r400_doclib_cnnb

- very small spelling correction

Change 17753 on 2002/03/06 by efong@efong_r400_win_tor

Added in SCL_CRTC and VGA_DISP model specs

Change 17751 on 2002/03/06 by nluu@nluu_r400_doclib_cnnb

- correct typos and stuff

Change 17736 on 2002/03/06 by jacarey@fl jacarey

Memory Controller 0-3 each has their own go/active clock pair.

Change 17706 on 2002/03/06 by nluu@nluu_r400_doclib_cnnb

- move visio drawings to a separate directory

Change 17689 on 2002/03/06 by efong@efong_r400_win_tor

changed the pin names to i and o for input and output pins to models

```
Change 17670 on 2002/03/06 by jacarey@fl_jacarey
Update for Command Queue Size Update
* Registers Updated
Change 17658 on 2002/03/06 by semara@semara_r400_win_tor
doc update
Change 17632 on 2002/03/06 by gregs@gregs r400 win marlboro
update
Change 17629 on 2002/03/06 by rbell@rbell_crayola_win_cvd
Renamed doc
Change 17622 on 2002/03/06 by jacarey@fl jacarey
Update RBBM FIFO depths on Top-Level Diagram
Change 17621 on 2002/03/06 by jacarey@fl jacarey
Stall condition for wait_until.
Change 17583 on 2002/03/05 by jiezhou@jiezhou_r400_win_tor
update
Change 17582 on 2002/03/05 by bbloemer@ma-jasonh
Updated pdf file.
Change 17580 on 2002/03/05 by bbloemer@ma-jasonh
Updated the description of the ordering engine to include A/B vs {\rm C/D}
fairness and the TEXTURE WIN COUNT.
Change 17578 on 2002/03/05 by jacarey@fl jacarey
Checkpoint Specification
Change 17575 on 2002/03/05 by jacarey@fl_jacarey
Renamed RBBM HI WRTR to RBBM HI RDY
Added Stage Inc for repeaters between BIF and RBBM.
Change 17556 on 2002/03/05 by rbell@rbell crayola win cvd
```

```
Updates after review
Change 17549 on 2002/03/05 by jacarey@fl_jacarey
Split the Re-Ordering Queue from the Pre-fetch Parser
Change 17533 on 2002/03/05 by jacarey@fl_jacarey
Updated Streams by CP for IB2 Packet Restrictions
Change 17523 on 2002/03/05 by jacarey@fl jacarey
Update to Fetcher Diagram
Change 17512 on 2002/03/05 by jacarey@fl jacarey
Bitwise OR
Change 17507 on 2002/03/05 by jacarey@fl_jacarey
Update IB PREFETCH START packet format
Change 17504 on 2002/03/05 by scroce@scroce_r400_win_marlboro
many modifications due to changes in the next release of vcsbuild.pl
Change 17489 on 2002/03/05 by jacarey@fl jacarey
Remove Ring State Queue
Change 17461 on 2002/03/05 by mdoggett@MA MDOGGETT LT
Added L1 Tag formats. Updated TCB section, figure, subblock descriptions.
Change 17452 on 2002/03/05 by semara@semara_r400_win_tor
update
Change 17450 on 2002/03/05 by bryans@bryans_crayola_doc
Update as per status meeting
Change 17449 on 2002/03/05 by semara@semara_r400_win_tor
rev 0.3
```

Change 17445 on 2002/03/05 by fhsien@fhsien r400 win marlboro

```
First draft of RB testbench plan
Change 17437 on 2002/03/05 by nbarbier@nbarbier_r400_win_tor
Initial Release.
Change 17436 on 2002/03/05 by jacarey@fl_jacarey
2D Scratch Memory Renamed to 2D Defaults Memory
Change 17431 on 2002/03/05 by lseiler@ma_lseiler
Version 0.7 of the Memory Format spec, with address equations, revised 2D and 3D tiling
formats, and 2D mipmap packing.
Change 17427 on 2002/03/05 by rbell@rbell\_crayola\_win\_cvd
Print warning if linear mode is used.
Change 17424 on 2002/03/05 by jacarey@fl jacarey
Added ROM Go/Active Pair
Change 17422 on 2002/03/05 by rvelez@rvelez r400 win tor
Changed address range to start from bit 31
Added Client ID to Write Ack Interface
Change 17405 on 2002/03/04 by whui@whui_r400_win_tor
updated section 10
Change 17404 on 2002/03/04 by nbarbier@nbarbier r400 win tor
Updated signal names.
Change 17395 on 2002/03/04 by jiezhou@jiezhou_r400_win_tor
update register list
Change 17387 on 2002/03/04 by jiezhou@jiezhou_r400_win_tor
update register list
Change 17386 on 2002/03/04 by jiezhou@jiezhou r400 win tor
update register list
```

```
Change 17380 on 2002/03/04 by llefebvr@llefebvre_laptop_r400
New revision of the sequencer spec.
Change 17351 on 2002/03/04 by bryans@bryans_crayola_doc
Update for 01/03/02
Change 17345 on 2002/03/04 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 17337 on 2002/03/04 by nluu@nluu_r400_doclib_cnnb
   - update
Change 17321 on 2002/03/04 by tho@tho r400 win
   updated
Change 17320 on 2002/03/04 by chwang@chwang_doc_r400_win_cvd
Update
Change 17315 on 2002/03/04 by efong@efong_r400_win_tor
Updated
Change 17313 on 2002/03/04 by jacarey@fl_jacarey
Update to CP's 2D Appendix
Change 17310 on 2002/03/04 by jasif@jasif r400 win tor
Updated
Change 17305 on 2002/03/04 by jacarey@fl_jacarey
Update Opcodes for Packets
Change 17190 on 2002/03/01 by lkang@lkang_r400_win_tor
updated dynamic clocking on SCLK domain.
Change 17187 on 2002/03/01 by frising@ma frising
v.1.33
```

```
-removed support for DXV textures
-updated texture size table for new max size restriction with 3Da 128bit textures with
borders.
-closed open issue about interaction of border color with depth
and shadow textures.
Change 17184 on 2002/03/01 by jayw@MA JAYW
weekend check-in
Change 17182 on 2002/03/01 by jacarey@fl_jacarey
Updates
Change 17169 on 2002/03/01 by mzhu@mzhu_r400_win_tor
remove support for linear surface mode
Change 17167 on 2002/03/01 by khabbari@khabbari r400 win
small corrections to line buffer arch doc
Change 17166 on 2002/03/01 by mzhu@mzhu r400 win tor
remove support for linear surface mode
add more details for FIFO write control
Change 17156 on 2002/03/01 by rbell@rbell crayola win cvd
Changed name of model to LB_DCP
Change 17155 on 2002/03/01 by rbell@rbell crayola win cvd
Changed name of doc file.
Change 17154 on 2002/03/01 by rbell@rbell_crayola_win_cvd
update
Change 17150 on 2002/03/01 by jacarey@fl_jacarey
Update SRC_X calculation for Small_Text PM4 packet
Change 17149 on 2002/03/01 by jacarey@fl_jacarey
Updated repeater flop usage text.
STAGE_INC used instead of N_STRAP
```

```
Change 17122 on 2002/03/01 by jiezhou@jiezhou_r400_win_tor
change ICON1_X_POS to ICON1_X_START
      ICON2_X_POX to ICON2_X_START
       ICON1 Y POS to ICON1 Y START
      ICON2_Y_POX to ICON2_Y_START
Change 17119 on 2002/03/01 by jowang@jowang_R400_win
added description for re-sync FIFO and some more diagrams
Change 17089 on 2002/02/28 by rbell@rbell crayola win cvd
Removed sub-word write enable
Change 17084 on 2002/02/28 by jacarey@fl jacarey
Fix Typo in the IM Load and IM Load Immediate packets
Change 17066 on 2002/02/28 by jacarey@fl_jacarey
1. Added IM LOAD IMMEDIATE packet.
2. Update to HOSTDATA_BLT2 and HOSTDATA_BLT_PNTR packets.
Change 17053 on 2002/02/28 by jiezhou@jiezhou r400 win tor
update
Change 17016 on 2002/02/28 by jacarey@fl_jacarey
Update Interrupt Signals Into RBBM
Change 17010 on 2002/02/28 by rbell@rbell crayola win cvd
Initial draft (and merge from older docs).
Change 16932 on 2002/02/27 by jowang@jowang R400 win
Block Spec: read buffer, re-sync FIFO, p2s sync, and line controller
diagram + description for read buffer
Change 16927 on 2002/02/27 by frising@ma_frising
Crap! fix cut and paste error. No version change.
Change 16925 on 2002/02/27 by frising@ma frising
v.1.32
```

```
-removed TT_CMD from texture instruction.
Change 16924 on 2002/02/27 by lkang@lkang_r400\_win\_tor
Added power state managment. section 6.0
Change 16917 on 2002/02/27 by lkang@lkang r400 win tor
Added 5.2 for dynamic clocking in display clocks
Change 16914 on 2002/02/27 by jiezhou@jiezhou_r400_win_tor
update after spec review Feb. 26
Change 16906 on 2002/02/27 by jacarey@fl_jacarey
Version 0.02 has Pre-Fetch Parser Algorithm Updates
Change 16897 on 2002/02/27 by tho@tho r400 win
   updated with section regarding the IO Model generating Perl Script
Change 16896 on 2002/02/27 by jacarey@fl jacarey
Updates to Packets and Pseudocode for Pre-Fetch Parser
Change 16878 on 2002/02/27 by mpersaud@mpersaud_r400_win_tor
* Updated link to Figure 1.2-1 VIP DMA Top Level Diagram
Change 16867 on 2002/02/27 by mpersaud@mpersaud_r400_win_tor
* Updated Section 4.1 Pin interface, added DCIO enable signals
* Updated Appendix for delta between R300 and R400
Change 16859 on 2002/02/27 by lseiler@ma lseiler
\ensuremath{\text{\textsc{new}}} 3D tile patterns and initial 3D equations
Change 16856 on 2002/02/27 by jacarey@fl_jacarey
Updates
Change 16850 on 2002/02/27 by jacarey@fl_jacarey
Pre-Fetch Parser Top-Level State Machine
```

Change 16849 on 2002/02/27 by khabbari@khabbari r400 win

```
correction to read pointer section in line buffer arch doc
Change 16843 on 2002/02/27 by rbell@rbell_crayola_win_cvd
Updates to macro name and pin out
Change 16815 on 2002/02/27 by markf@markf_r400_win_marlboro
Updated Analog section to R300 numbers. Fixed quantity of DLL's for RV400 and R400.
Removed LVDS from R400.
Change 16809 on 2002/02/27 by nluu@nluu_r400_doclib_cnnb
- update
Change 16799 on 2002/02/27 by nluu@nluu_r400_doclib_cnnb
- update
Change 16794 on 2002/02/27 by jacarey@fl jacarey
Updates to 2D Packets
Change 16793 on 2002/02/27 by mmantor@mmantor r400 win
updated memory areas based on the memory compilation of memories in the following
blocks for the VGT, PA, SC blocks and updated labeling for current planned blocks
Change 16779 on 2002/02/26 by semara@semara_r400_win_tor
update doc
Change 16778 on 2002/02/26 by semara@semara r400 win tor
doc updates
Change 16762 on 2002/02/26 by jayw@MA_JAYW
typo fixes
Change 16734 on 2002/02/26 by jacarey@fl_jacarey
Checkpoint Specifications
Change 16731 on 2002/02/26 by lseiler@ma lseiler
```

Spreadsheets of 2D address conversions

```
Change 16730 on 2002/02/26 by lseiler@ma_lseiler
Updated 1D and 2D formats and address equations
Change 16718 on 2002/02/26 by efong@efong r400 win tor
updated io spec due to change in dcio spec
Change 16710 on 2002/02/26 by jacarey@fl jacarey
Updates to packets.
Change 16688 on 2002/02/26 by jacarey@fl_jacarey
Update Diagram
Change 16661 on 2002/02/26 by jacarey@fl jacarey
Update RTEE Diagram (Gated and Permanent Clocks)
Change 16660 on 2002/02/26 by rbell@rbell crayola win cvd
First draft of what env will look like.
Change 16658 on 2002/02/26 by mpersaud@mpersaud_r400_win_tor
* added Section 4.1 Pin interface
* updated Appendix for delta between R300 and R400
^{\star} update Figure 1.2-1 VIP Top Level Diagram to move uvip rbbmif to DC level and rename
to RBBMIF
Change 16657 on 2002/02/26 by mpersaud@mpersaud r400 win tor
Move uvip rbbmif to DC level and rename to RBBMIF
Change 16653 on 2002/02/26 by jacarey@fl jacarey
Update Interfaces to RBBM from BIF and CP
Fix Type on MIU Diagram
Change 16648 on 2002/02/26 by jhoule@MA_JHOULE
Brought back DIM 3D in case we get rid of dual format 3D texture (if noise gets dropped
Moved BORDER_* together.
Only affects TFetch Const.
```

```
Change 16646 on 2002/02/26 by jiezhou@jiezhou_r400_win_tor
update
Change 16632 on 2002/02/26 by nbarbier@nbarbier\_r400\_win\_tor
Updated document after resolving open issues.
Change 16602 on 2002/02/26 by jacarey@fl jacarey
Updated clock name for RBBM
Change 16565 on 2002/02/25 by jiezhou@jiezhou_r400_win_tor
update
Change 16552 on 2002/02/25 by dclifton@dclifton r400
Updates to interface, drawings, lines, points, and polymode.
Change 16546 on 2002/02/25 by khabbari@khabbari r400 win
added more details to the 1b arch doc
Change 16537 on 2002/02/25 by rbell@rbell_crayola_win_cvd
Updates after review
Change 16533 on 2002/02/25 by markf@markf_r400_win_marlboro
Updated SX w/ parameter caches
Change 16521 on 2002/02/25 by rbell@rbell crayola win cvd
update
Change 16505 on 2002/02/25 by jacarey@fl_jacarey
Checkpoint CP Spec.
Change 16503 on 2002/02/25 by jacarey@fl_jacarey
Update Command Stream Fetcher Diagram
Change 16499 on 2002/02/25 by jimmylau@jimmylau r400 win tor
```

Add a section on stereoscopic display. Change CRTC naming convention to CRTC0 / CRTC1.

```
Change 16495 on 2002/02/25 by jacarey@fl_jacarey
Update Queues on Diagram for PFP
Change 16494 on 2002/02/25 by {\tt mpersaud@mpersaud\_r400\_win\_tor}
added state machine appendix
Change 16493 on 2002/02/25 by mpersaud@mpersaud r400 win tor
update to add uvip_rbbmif
Change 16492 on 2002/02/25 by mpersaud@mpersaud_r400_win_tor
general clean up
Change 16490 on 2002/02/25 by mpersaud@mpersaud r400 win tor
* added Appendix - R300 vs. R400 delta
* updated VIP Top Level diagram
* updated structure section
Change 16489 on 2002/02/25 by mpersaud@mpersaud_r400_win_tor
* moved uvipdmaregs into uvipdma
* renamed uvip_rbbm to uvip_rbbmif
* added ORing of interrupts
Change 16488 on 2002/02/25 by vliu@vliu_r400_cnvliu100_win_cvd
Update
Change 16484 on 2002/02/25 by rbell@rbell crayola win cvd
updated
Change 16482 on 2002/02/25 by chwang@chwang_r400_win_cvd
Update.
Change 16470 on 2002/02/25 by tho@tho_r400_win
   update
Change 16469 on 2002/02/25 by jasif@jasif r400 win tor
Updated
```

Change 16462 on 2002/02/25 by efong@efong_r400_win_tor Updated Change 16450 on 2002/02/25 by jacarey@fl_jacarey Add ROM pins back to the RBBM Spec. Change 16412 on 2002/02/22 by nluu@nluu r400 doclib cnnb - update Change 16411 on 2002/02/22 by jiezhou@jiezhou_r400_win_tor 1) add Overlay Format Expansion block 2) remove dynamic expansion for Graphic/overlay keyer 3) add host read/write description for LUT palette 4) add ignore_alpha for graphic/overlay keyer 5) update graphic/overlay Mux function 6) add constant format for matrix conversion Change 16407 on 2002/02/22 by lkang@lkang r400 win tor Added dynamic clocking on display clock domain. sec. 5.1 Change 16359 on 2002/02/22 by gregs@gregs_r400_win_marlboro Added interface to CG_PM. Change 16349 on 2002/02/22 by gregs@gregs_r400_win_marlboro daily update. Change 16322 on 2002/02/22 by lseiler@ma lseiler Updated with 1D and 2D access equations Change 16319 on 2002/02/22 by jacarey@fl jacarey Removed ROM's RTR signals from RBBM interface. BIF forwards transactions to the MH instead of through the RBBM. Change 16309 on 2002/02/22 by jacarey@fl_jacarey Update RBIU to show that read return data is registed on permanent clock.

Change 16304 on 2002/02/22 by jacarey@fl jacarey

```
1. Updated interrupt signals to the RBBM
** Senders of interrupts need to do their own combining.
Change 16288 on 2002/02/22 by bryans@bryans_crayola_doc
Update VideoIP DV Methodology to include CRTC configuration
Change 16284 on 2002/02/22 by efong@efong r400 win tor
added in sentence for MV_DISABLE and VGA_DISABLE to be hooked up to BIF model
Change 16283 on 2002/02/22 by efong@efong_r400_win_tor
fixed up the spec due to the 0.1 version of the power management spec
Change 16217 on 2002/02/21 by fhsien@fhsien r400 win marlboro
Added command chart
change runtest --> runtest.pl
Change 16213 on 2002/02/21 by rbell@rbell crayola win cvd
First draft of this
Change 16210 on 2002/02/21 by mdoggett@MA_MDOGGETT_LT
Updated formats. Added 2d interlace format and 3d four layer format. Added L2 read
synchronisation description.
Change 16207 on 2002/02/21 by frising@ma frising
v.1.30
Change 16194 on 2002/02/21 by lkang@lkang_r400_win_tor
Power management spec for DC
Change 16178 on 2002/02/21 by hartogs@fl_hartogs
Minor Cleanup
Change 16177 on 2002/02/21 by jacarey@fl_jacarey
No Change
```

Change 16175 on 2002/02/21 by rbell@rbell crayola win cvd

```
More updates since the last reviews
Change 16174 on 2002/02/21 by jacarey@fl_jacarey
Checkpoint All Specifications
Change 16170 on 2002/02/21 by hartogs@fl_hartogs
Fixed up some tessellation stuff.
Change 16147 on 2002/02/21 by scroce@scroce_r400_win_marlboro
Some small changes to the doc
Change 16146 on 2002/02/21 by rbell@rbell crayola win cvd
Updates to both palette models
Change 16145 on 2002/02/21 by {\tt mpersaud@mpersaud\_r400\_win\_tor}
Initial Revision
Change 16142 on 2002/02/21 by mpersaud@mpersaud_r400_win_tor
Changed Text Box
Change 16138 on 2002/02/21 by jacarey@fl jacarey
Revision of RBBM and CP areas
Change 16109 on 2002/02/20 by dwong@cndwong2
version 0.4
Change 16106 on 2002/02/20 by nluu@nluu_r400_doclib_cnnb
- update
Change 16100 on 2002/02/20 by nluu@nluu_r400_doclib_cnnb
   - update
Change 16095 on 2002/02/20 by fhsien@fhsien_r400_win_marlboro
DOC for Runtest Script
Change 16083 on 2002/02/20 by jacarey@fl jacarey
```

```
Updated CP and RBBM Areas
Change 16079 on 2002/02/20 by gregs@gregs_r400_win_marlboro
daily update.
Change 16075 on 2002/02/20 by mpersaud@mpersaud_r400_win_tor
General update and/or addition to depot.
Change 16053 on 2002/02/20 by rbell@rbell_crayola_win_cvd
New spec for R400
Change 16041 on 2002/02/20 by scroce@scroce r400 win marlboro
Clearing up some things once again
Change 16033 on 2002/02/20 by csampayo@fl_csampayo_r400
Updated VGT and SU sections and schedule
Change 16009 on 2002/02/20 by scroce@scroce_r400_win_marlboro
Trying to clarify the setup doc
Change 16007 on 2002/02/20 by rramsey@RRAMSEY P4 r400 win
Update rect description
Change 15992 on 2002/02/20 by efong@efong r400 win tor
changed from dispout inject to scaler inject model
Change 15972 on 2002/02/20 by jasif@jasif_r400_win_tor
Partially updated after document review.
Change 15952 on 2002/02/19 by ctaylor@fl_ctaylor_r400_win_marlboro
Most of top-level arch done.
Change 15923 on 2002/02/19 by bryans@bryans_crayola_win_cvd
Add test plan templates for VID core
Change 15920 on 2002/02/19 by bryans@bryans crayola win cvd
```

```
Update for this week
Change 15919 on 2002/02/19 by efong@efong_r400_win_tor
fixed up the spec due to the review
Change 15914 on 2002/02/19 by gregs@gregs_r400\_win\_marlboro
Update.
Change 15878 on 2002/02/19 by bryans@bryans_crayola_win_cvd
Source tree for display core
Change 15862 on 2002/02/19 by efong@efong r400 win tor
renamed top level diagram from hdcp disable to hdcp enable
changed the forciable signals section to be more standardized
Change 15860 on 2002/02/19 by ygiang@ygiang r400 win marlboro
added: Ferrt Shader Docs and Test environment cook book
Change 15851 on 2002/02/19 by efong@efong r400 win tor
updated due to review and some pad changes
Change 15837 on 2002/02/19 by tho@tho_r400_win
   updated
Change 15828 on 2002/02/19 by nbarbier@nbarbier r400 win tor
Initial revision of DCIO Interface.
Change 15770 on 2002/02/18 by beiwang@bei mcspec
deleted CAM and address return queues from mcci diagram, modified the cam diagram,
added note on bank ABCD->bank 0,1,2,3
Change 15752 on 2002/02/18 by tho@tho_r400_win
   update cursor test plan
Change 15742 on 2002/02/18 by jasif@jasif r400 win tor
Updated.
```

```
Change 15741 on 2002/02/18 by bryans@bryans_crayola_win_cvd
Update status/dates
Change 15727 on 2002/02/18 by vliu@vliu_r400_cnvliu100_win_cvd
Update the status.
Change 15723 on 2002/02/18 by efong@efong r400 win tor
Updated dates
Change 15720 on 2002/02/18 by chwang@chwang_r400_win_cvd
Update.
Change 15718 on 2002/02/18 by efong@efong r400 win tor
after final review ...
Change 15716 on 2002/02/18 by jasif@jasif r400 win tor
Added new forcible signals table.
Change 15713 on 2002/02/18 by jasif@jasif_r400_win_tor
Updated Error section. Added open issue on dynamic clocking.
Change 15711 on 2002/02/18 by tho@tho_r400_win
   update
Change 15709 on 2002/02/18 by rbell@rbell crayola win cvd
Changes
Change 15689 on 2002/02/16 by jimmylau@jimmylau_r400_win_tor
Major revision of CRTC block specs after the first specs review.
Change 15679 on 2002/02/15 by jiezhou@jiezhou_r400_win_tor
modified state machine
Change 15678 on 2002/02/15 by jiezhou@jiezhou r400 win tor
add 32 bpp digital output for graphic request
```

```
Change 15676 on 2002/02/15 by jiezhou@jiezhou_r400_win_tor
Initial release
Change 15671 on 2002/02/15 by jacarey@fl jacarey
Checkpoint Specifications
Change 15669 on 2002/02/15 by mzhu@mzhu r400 win tor
initial version of DMIF block spec
Change 15667 on 2002/02/15 by mzhu@mzhu_r400_win_tor
define pixel order for tiling mode with one DCP pipeline enabled
Change 15664 on 2002/02/15 by kcorrell@kcorrell r400 docs marlboro
Updated GART area in MH
Change 15658 on 2002/02/15 by gregs@gregs r400 win marlboro
Added parallel ROM support on the DVO interface.
Change 15627 on 2002/02/15 by gregs@gregs_r400_win_marlboro
ROM+DEBUG blocks: increased are by 25% and added 640x8 SRAM area.
Change 15593 on 2002/02/15 by lseiler@ma lseiler
Restored the unrevised text that I deleted for review version 0.4, removed change bars
Change 15586 on 2002/02/15 by gregs@gregs r400 win marlboro
increased CG area by 50% (an estimate for new power management functionality).
Change 15585 on 2002/02/15 by jacarey@fl_jacarey
Clarify Byte Enable Support Through the RBBM.
Change 15570 on 2002/02/15 by jacarey@fl_jacarey
1. Skew Control Update
2. Update Command FIFO Depth
```

Change 15564 on 2002/02/15 by kcorrell@kcorrell_r400_docs_marlboro

```
updated MH area
Change 15563 on 2002/02/15 by efong@efong_r400_win_tor
closed some open issues
Change 15562 on 2002/02/15 by efong@efong r400 win tor
updated a ton of things
Change 15544 on 2002/02/14 by rvelez@rvelez_r400_win_tor
Added more details to the spec
Change 15543 on 2002/02/14 by jasif@jasif_r400_win_tor
Updated.
Change 15541 on 2002/02/14 by gregs@gregs_r400_win_marlboro
daily changes
Change 15534 on 2002/02/14 by csampayo@fl csampayo r400
Updated SU section, both docs
Change 15533 on 2002/02/14 by beiwang@bei_r400_area
Added some MC skid buffer
Change 15529 on 2002/02/14 by beiwang@bei_r400_area
Added MC changes
Change 15508 on 2002/02/14 by vromaker@MA VIC P4
updated SQ macro area numbers to those obtained with .13 compiler
Change 15492 on 2002/02/14 by jasif@jasif_r400_win_tor
Updated with recommendations made during the review.
Change 15455 on 2002/02/14 by rbell@rbell_crayola_win_cvd
Added open issues, and changes as per Jie.
```

Change 15450 on 2002/02/14 by rbell@rbell_crayola_win_cvd

Changes after the DMIF design review Change 15446 on 2002/02/14 by jacarey@fl_jacarey Update Diagrams Change 15418 on 2002/02/13 by csampayo@fl csampayo r400 Updated most of the SU section. Change 15404 on 2002/02/13 by jacarey@fl_jacarey Checkpoint CP Specifications Change 15392 on 2002/02/13 by jacarey@fl_jacarey Update Interface to Memory Hub on Diagram Change 15390 on 2002/02/13 by gregs@gregs r400 win marlboro daily update Change 15387 on 2002/02/13 by gregs@gregs r400 win marlboro daily update Change 15377 on 2002/02/13 by jacarey@fl_jacarey Update Internal Register Bus Connections Change 15375 on 2002/02/13 by jasif@jasif_r400_win_tor Updated. Change 15371 on 2002/02/13 by jacarey@fl jacarey Minor Updates to RBBM. Change 15369 on 2002/02/13 by jacarey@fl jacarey Update Diagrams Change 15358 on 2002/02/13 by gregs@gregs_r400_win_marlboro daily update Change 15333 on 2002/02/13 by jacarey@fl_jacarey

Updates to RTEE Diagram Change 15325 on 2002/02/13 by jacarey@fl_jacarey Update for Review Change 15304 on 2002/02/12 by tho@tho r400 win removed MV DISABLE strap from doc. Change 15301 on 2002/02/12 by tho@tho_r400_win Changed strap value generation, updated forcible signal section Change 15297 on 2002/02/12 by jacarey@fl_jacarey Incremental Update to the Spec. Change 15296 on 2002/02/12 by jacarey@fl jacarey Revision 0.06 of RBBM Spec Change 15295 on 2002/02/12 by hartogs@fl hartogs Updated the RBBM interface table. Change 15281 on 2002/02/12 by jacarey@fl_jacarey Update Diagrams Change 15279 on 2002/02/12 by jasif@jasif_r400_win_tor Updated dynamic clocking document. Changed file name from RBBM_model.doc to RBBMIF_model.doc. Change 15276 on 2002/02/12 by jacarey@fl_jacarey Update connections to command stream fetcher Change 15273 on 2002/02/12 by jacarey@fl_jacarey Separate RB_RPTR write requests to MIU Change 15271 on 2002/02/12 by jacarey@fl_jacarey Updates to Diagram of RBBM Top-Level

Change 15265 on 2002/02/12 by gregs@gregs r400 win marlboro

```
new spec - initial version.
Change 15264 on 2002/02/12 by efong@efong_r400_win_tor
Fixed up IO model after new review
Change 15222 on 2002/02/12 by jhoule@MA_JHOULE
0.9.5:
Added WR_MASK_{XYZW} in SQ<--TPC interface.
Updated TOC and LOF.
Change 15216 on 2002/02/12 by efong@efong_r400_win_tor
Updated PLL model because of the review as well as added in GO and BUSY signals
Change 15215 on 2002/02/12 by efong@efong r400 win tor
put documentation for VIP_DEVICE being inverted.
Change 15191 on 2002/02/11 by jasif@jasif r400 win tor
Changed name of document.
Change 15190 on 2002/02/11 by jasif@jasif_r400_win_tor
Updated.
Change 15188 on 2002/02/11 by bryans@bryans_crayola_win_cvd
Update with feedback from meeting; add model code reviews, weekly issues
Change 15182 on 2002/02/11 by nluu@nluu r400 cnnb
   - update
Change 15167 on 2002/02/11 by jasif@jasif_r400_win_tor
Added section on avoiding race conditions and behavioural coding styles for
performance.
Change 15166 on 2002/02/11 by jacarey@fl_jacarey
Update Waveforms for Slow Clients
```

Change 15165 on 2002/02/11 by $gregs@gregs_r400_win_marlboro$

```
Corrected typos.
Change 15164 on 2002/02/11 by khabbari@khabbari_r400_win
the first released version of crtc tv interface document.
Also added some details to line buffer arch document.
Change 15156 on 2002/02/11 by scroce@scroce_r400_win_marlboro
Added some little things about v2html
Change 15154 on 2002/02/11 by jacarey@fl_jacarey
Remove Skew Control Signal Between RBBM and CP
Change 15151 on 2002/02/11 by dclifton@dclifton r400
Updates to drawings
Change 15139 on 2002/02/11 by nluu@nluu_r400_cnnb
   - update
Change 15133 on 2002/02/11 by nluu@nluu_r400_cnnb
- update
Change 15126 on 2002/02/11 by nluu@nluu r400 cnnb
   - update
Change 15121 on 2002/02/11 by csampayo@fl csampayo lt r400
SU updates
Change 15120 on 2002/02/11 by nluu@nluu_r400_cnnb
- update status
Change 15115 on 2002/02/11 by hartogs@fl_hartogs
Refreshed early diagrams and text.
Change 15108 on 2002/02/11 by bryans@bryans_crayola_win_cvd
Update milestone dates
```

Change 15106 on 2002/02/11 by nluu@nluu r400 cnnb

```
- check in so I don't lose the changes
Change 15100 on 2002/02/11 by jasif@jasif_r400_win_tor
Updated.
Change 15099 on 2002/02/11 by efong@efong_r400_win_tor
Updated DV status
Change 15096 on 2002/02/11 by dglen@dglen_r400_dell
Added section on update and control of double buffered register fields.
Change 15095 on 2002/02/11 by vliu@vliu r400 cnvliu100 win cvd
Updating the dates.
Change 15091 on 2002/02/11 by dclifton@dclifton_r400
Changed a few diagrams and equations slightly
Change 15079 on 2002/02/11 by chwang@chwang_r400_win_cvd
Update
Change 15073 on 2002/02/11 by tho@tho r400 win
   updated status report
Change 15068 on 2002/02/11 by dclifton@dclifton r400
Updated top level block diagram
Change 15067 on 2002/02/11 by rbell@rbell_crayola_win_cvd
Updates
Change 15066 on 2002/02/11 by wlawless@wlawless
Nothing major
Change 15018 on 2002/02/08 by jasif@jasif_r400_win_tor
Initial revision.
```

Change 15017 on 2002/02/08 by rvelez@rvelez r400 win tor

Added more description for the interface Change 15016 on 2002/02/08 by gregs@gregs_r400_win_marlboro Updated after David Glen and John Carey reviews. Change 15002 on 2002/02/08 by $jowang@jowang_R400_win$ added a column for # of horizontal filter taps Change 15001 on 2002/02/08 by jowang@jowang_R400_win updated with overscan and interlace interface signals Change 15000 on 2002/02/08 by jasif@jasif r400 win tor Updated Joveria's status. Change 14967 on 2002/02/08 by khabbari@khabbari_r400_win added write/read pointer des to the LB ARCH doc Change 14962 on 2002/02/08 by gregs@gregs_r400_win_marlboro ROM spec is ready for verilog coding phase. Change 14961 on 2002/02/08 by efong@efong r400 win tor Updated document after initial review Change 14959 on 2002/02/08 by rbell@rbell crayola win cvd Added sample test code. Change 14955 on 2002/02/08 by rbell@rbell_crayola_win_cvd Initial draft Change 14948 on 2002/02/08 by rbell@rbell_crayola_win_cvd Updates after review Change 14934 on 2002/02/08 by paulv@MA_PVELLA Updated MHS with most recent changes and updates.

Change 14912 on 2002/02/07 by csampayo@fl csampayo r400

Added unit/function owners and hyperlinks to the ${\tt R400_PA_Functional_Validation_Approach_Plan\ document}$ Change 14904 on 2002/02/07 by jasif@jasif r400 win tor Modified dynamic clock section. Change 14895 on 2002/02/07 by hartogs@fl hartogs Completed description of de-stripping, de-fanning, decomposition of quads and polygons into triangles, prprovoking vertex (flat shading), and line stipple wireframe fill mode issues. Change 14883 on 2002/02/07 by jhoule@MA_JHOULE Added 32-bit channels blending. Described math foundations. Updated TOC. Change 14878 on 2002/02/07 by grayc@grayc r400 win initial checkin Change 14877 on 2002/02/07 by grayc@grayc r400 win moving files Change 14861 on 2002/02/07 by grayc@grayc_r400_win Initial checkin Change 14855 on 2002/02/07 by mdoggett@MA MDOGGETT LT Updates according to TC spec review and many more discussion. Changes to TCD figure, L1 and L2 tags, L2 formats, padding and degamma. Change 14849 on 2002/02/07 by efong@efong_r400_win_tor

Made some changes due to the review of the strap model.

Change 14842 on 2002/02/07 by rbell@rbell_crayola_win_cvd

Changed CP to DCP

Change 14824 on 2002/02/07 by jhoule@MA JHOULE

Forgot the usage tables. Now updated!

```
Change 14823 on 2002/02/07 by jhoule@MA_JHOULE
Moved fields (VTX_FORMAT, EXP_ADJUST) from VFetch instr so that they are byte-aligned.
Change 14818 on 2002/02/07 by jhoule@MA JHOULE
Aesthetic
Change 14817 on 2002/02/07 by jhoule@MA JHOULE
Brought SRC SEL* in same DWORD.
Change 14806 on 2002/02/06 by jiezhou@jiezhou_r400_win_tor
update window control
Change 14797 on 2002/02/06 by efong@efong r400 win tor
New version of the IO model with the names fixed up and some of the issues closed.
Change 14796 on 2002/02/06 by jhoule@MA JHOULE
Changed instruction fields so that they match between VFetch and TFetch.
This helps the SQ (fields are always at the same place).
Also added cool macro for bit numbers.
Change 14785 on 2002/02/06 by bbloemer@ma-jasonh
Removed address return bus and base and coord from RB access bus.
Change 14698 on 2002/02/05 by jacarey@fl jacarey
Checkpoint the CP's PM4 Specification
Change 14697 on 2002/02/05 by jimmylau@jimmylau r400 win tor
Rev 0.3. Decided to keep notation of internal & external overscan.
Change 14696 on 2002/02/05 by fhsien@fhsien_r400_win_marlboro
Add Running eum_only. (no build is done).
Change 14694 on 2002/02/05 by jacarey@fl_jacarey
Checkpoint 2D Appendix
```

Change 14691 on 2002/02/05 by jacarey@fl jacarey

Checkpoint RBBM Spec Change 14687 on 2002/02/05 by jacarey@fl_jacarey Update CP's Memory Interface Unit Diagram Change 14685 on 2002/02/05 by jacarey@fl_jacarey Update RBBM Top-Level Diagram 1. Slip Buffer Registers 2. Add RBBM CP DMA DRAW DEC signal 3. Update Switch to Send Host Data through Non-Queued Path Change 14677 on 2002/02/05 by hartogs@fl hartogs Added more information on the primitive types and provoking vertex. Change 14674 on 2002/02/05 by rbell@rbell_crayola_win_cvd initial draft Change 14667 on 2002/02/05 by jacarey@fl jacarey Update Change 14661 on 2002/02/05 by jacarey@fl jacarey Update PFP to ME Diagram Remove Diagram for Old Fetchers Change 14643 on 2002/02/05 by khabbari@khabbari r400 win added a block diagram for write data path in the line buffer doc Change 14631 on 2002/02/05 by tho@tho r400 win updated Data Processing Algorithms section regarding PLI/CLI usage Change 14621 on 2002/02/05 by efong@efong_r400_win_tor Updated PLL model to support stop and go signals Change 14587 on 2002/02/04 by khabbari@khabbari_r400_win

added some description to data processing algorithm in line buffer arch document

```
Change 14582 on 2002/02/04 by jasif@jasif_r400_win_tor
Updated finish dates.
Change 14568 on 2002/02/04 by vromaker@MA VIC P4
updates
Change 14551 on 2002/02/04 by jasif@jasif r400 win tor
Updated.
Change 14543 on 2002/02/04 by rbell@rbell_crayola_win_cvd
Final draft
Change 14540 on 2002/02/04 by gregs@gregs\_r400\_win\_marlboro
Added/updated after implementation analysis and adding parallel PROM support.
Change 14528 on 2002/02/04 by frising@ma frising
v.1.19
-Fixed up how certain texture formats go into the L2 cache in order
to guarantee consistency within a texture family (e.g. 8, 8 8,
8_8_8_8).
Change 14527 on 2002/02/04 by jasif@jasif r400 win tor
Updated.
Change 14526 on 2002/02/04 by jasif@jasif r400 win tor
Added section on dynamic clocking.
Change 14509 on 2002/02/04 by paulv@MA PVELLA
Updated block diagram to match changes and updates to the MHS section in the spec.
Change 14500 on 2002/02/04 by nluu@nluu_r400_cnnb
- update
Change 14499 on 2002/02/04 by rbell@rbell_crayola_win_cvd
Added assumptions, stubs, model terminology, etc.
Change 14495 on 2002/02/04 by jacarey@fl jacarey
```

```
Updates to RTEE Event Engine Diagram
Change 14492 on 2002/02/04 by vromaker@MA_VIC_P4
updates, new figures
Change 14481 on 2002/02/04 by chwang@chwang_r400_win_cvd
Update.
Change 14476 on 2002/02/04 by rbell@rbell_crayola_win_cvd
Updates
Change 14475 on 2002/02/04 by rbell@rbell crayola win cvd
Updates after reviews, added errors warnings and assumptions.
Change 14474 on 2002/02/04 by jimmylau@jimmylau_r400\_win\_tor
Revision 0.2 of CRTC block specs. Remove notation of external/internal overscan.
Overscan is always outside the active display area.
Change 14472 on 2002/02/04 by jasif@jasif r400 win tor
Updated.
Change 14470 on 2002/02/04 by tho@tho_r400_win
   updated status report
Change 14469 on 2002/02/04 by vromaker@MA VIC P4
new figures
Change 14468 on 2002/02/04 by efong@efong r400 win tor
Updated
Change 14466 on 2002/02/04 by llefebvr@llefebvre_laptop_r400
Version 1.7 of the Sequencer spec.
Change 14465 on 2002/02/03 by jiezhou@jiezhou_r400\_win\_tor
Add some control management
```

```
Change 14464 on 2002/02/03 by vromaker@MA_VIC_P4
changes
Change 14444 on 2002/02/01 by jasif@jasif_r400_win_tor
Updated open issues.
Change 14441 on 2002/02/01 by jasif@jasif r400 win tor
Updated after spec review.
Change 14440 on 2002/02/01 by efong@efong_r400_win_tor
Added in IO model and strap model
Change 14439 on 2002/02/01 by jasif@jasif\_r400\_win\_tor
Updated
Change 14436 on 2002/02/01 by mzhu@mzhu r400 win tor
change CP to DCP
Change 14426 on 2002/02/01 by rbagley@MA RBAGLEY LTXP
0.1 (d) Intermediate check-in. Additional comments. The bloat of the container doc has
been remedied.
Change 14424 on 2002/02/01 by jacarey@fl_jacarey
Checkpoint Specifications
Change 14416 on 2002/02/01 by khabbari@khabbari r400 win
small fixes
Change 14411 on 2002/02/01 by khabbari@khabbari_r400_win
The first draft of line buffer doc
Change 14402 on 2002/02/01 by rbell@rbell_crayola_win_cvd
Changes some arch/conf names, added BFMs section.
Change 14400 on 2002/02/01 by jasif@jasif r400 win tor
Updated
```

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Change 14399 on 2002/02/01 by semara@semara_r400_win_tor
rev 2
Change 14395 on 2002/02/01 by rbagley@MA_RBAGLEY_LTXP
1.0 (c) Revisions to instructions and miscellaneous corrections.
Change 14379 on 2002/02/01 by nbarbier@nbarbier r400 win tor
First revision of CRTC/DISPOUT interface
Change 14377 on 2002/02/01 by frising@ma_frising
-Change GetBorderColorPercentage to GetBorderColorFraction. Thanks
Jocelyn.
-no version change.
Change 14366 on 2002/01/31 by jimmylau@jimmylau_r400\_win\_tor
Initial revision
Change 14365 on 2002/01/31 by frising@ma_frising
v.1.18
-Added 6 new multimedia texture formats
-remove FetchWhiteTexture, replace with GetBorderColorPercentage
-remove mask option from DST_SEL_ in texture constant
-move mask option of DST_SEL in insts from 6 to 7
-Add new YCbCr black border color
Change 14363 on 2002/01/31 by vromaker@MA_VIC_P4
new
Change 14362 on 2002/01/31 by vromaker@MA VIC P4
updates
Change 14356 on 2002/01/31 by hartogs@fl_hartogs
Still in progress.
New block diagrams.
Checked-in for backup.
```

Change 14339 on 2002/01/31 by jacarey@fl_jacarey

Update Busy Signals on Diagrams Change 14333 on 2002/01/31 by chwang@chwang_r400_win_cvd Updated Status. Change 14313 on 2002/01/31 by efong@efong r400 win tor Fixed up a ton of things from the review meeting Change 14301 on 2002/01/31 by lkang@lkang_r400_win_tor new directories Change 14300 on 2002/01/31 by lkang@lkang_r400_win_tor This directory is for DC-MH interface block architecture and implementation specs Change 14299 on 2002/01/31 by wlawless@wlawless This version was updated to match the new Arch spec. The diagrams were updated.. The depth logic is still old because we are working the color right now. Change 14292 on 2002/01/30 by rbagley@MA_RBAGLEY_LTXP 1.0 (b) Further revision. Change 14287 on 2002/01/30 by dwong@cndwong2 xDCT document, v0.2 Adding in implementation details as well as updating open issues. Change 14275 on 2002/01/30 by rbell@rbell crayola win cvd more changes Change 14267 on 2002/01/30 by lseiler@ma_lseiler Version 0.4: major update of sections 1-3, remaining sections temporarily removed until they can be fully updated. Change 14265 on 2002/01/30 by jacarey@fl_jacarey

Streams Processed by CP Diagram

Change 14263 on 2002/01/30 by jacarey@fl_jacarey

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Baseline New Documents in Perforce
Change 14260 on 2002/01/30 by jacarey@fl_jacarey
Checkpoint Specifications
Change 14250 on 2002/01/30 by nluu@nluu r400 cnnb
   - fix typo
Change 14244 on 2002/01/30 by gregs@gregs_r400_win_marlboro
Updated with the new CP based power management ideas. Added startup description.
Change 14239 on 2002/01/30 by khabbari@khabbari_r400_win
added some description in "Interface Functional Description and Purpose" section
Change 14238 on 2002/01/30 by jasif@jasif r400 win tor
Updated.
Change 14237 on 2002/01/30 by askende@andi r400 docs
new rev of the document.
Change 14236 on 2002/01/30 by tho@tho_r400_win
   updated rom controller model test plan
Change 14212 on 2002/01/30 by nluu@nluu_r400_cnnb
   - update
Change 14202 on 2002/01/29 by dclifton@dclifton r400
Updated with new diagrams to match pinout, added zoffset info
Change 14198 on 2002/01/29 by jiezhou@jiezhou r400 win tor
remove
Change 14197 on 2002/01/29 by jiezhou@jiezhou_r400_win_tor
to remove CP
Change 14196 on 2002/01/29 by jiezhou@jiezhou_r400_win_tor
```

Change name CP to DCP Change 14193 on 2002/01/29 by $jasif@jasif_r400_win_tor$ Initial Revision of DCCIF Model Spec Change 14184 on 2002/01/29 by mdoggett@MA MDOGGETT LT Updated TCD section. New top level diagram. Algorithm for DXT added. Change 14183 on 2002/01/29 by rthambim@rthambim_r400_win_tor Modified naming convention and removed SWAP bits. Change 14180 on 2002/01/29 by lseiler@ma_lseiler Preliminary version, pdf update Change 14179 on 2002/01/29 by lseiler@ma lseiler Preliminary RB spec update Change 14164 on 2002/01/29 by mpersaud@mpersaud r400 win tor Initial rev Change 14156 on 2002/01/29 by rbell@rbell_crayola_win_cvd Added straps Change 14155 on 2002/01/29 by rbell@rbell_crayola_win_cvd First draft. Change 14143 on 2002/01/29 by lseiler@ma lseiler Version 0.6, with depth and color compression formats Change 14139 on 2002/01/29 by smoss@smoss crayola win updated su_sc interface Change 14138 on 2002/01/29 by markf@markf_r400_win_marlboro R400 Area Estimate

Change 14136 on 2002/01/29 by kcorrell@kcorrell_r400_docs_marlboro

```
updates as a result of the design review and further discussion with designers of MH
clients
Change 14135 on 2002/01/29 by jasif@jasif_r400_win_tor
Added InterModel Bus Interface Spec.
Change 14124 on 2002/01/29 by scroce@scroce_r400_win_marlboro
Some additional touches
Change 14115 on 2002/01/29 by bryans@bryans_crayola_win_cvd
Update for week of Jan 28
Change 14113 on 2002/01/29 by hartogs@fl hartogs
Updated -- still in progress.
Change 14108 on 2002/01/29 by vromaker@MA\_VIC\_P4
updates, new vsds
Change 14102 on 2002/01/28 by rbagley@MA_RBAGLEY_LTXP
0.1 (a): partial reorganization and instruction updates.
Change 14098 on 2002/01/28 by semara@semara r400 win tor
correct the links
Change 14093 on 2002/01/28 by semara@semara r400 win tor
remove
Change 14089 on 2002/01/28 by semara@semara_r400_win_tor
initial release
Change 14071 on 2002/01/28 by semara@semara_r400_win_tor
remove vcd files
Change 14068 on 2002/01/28 by semara@semara_r400_win_tor
adding vga docs
Change 14057 on 2002/01/28 by smoss@smoss crayola win
```

```
Updated registers and functionality
Change 14055 on 2002/01/28 by rbell@rbell_crayola_win_cvd
Fixed entry function names
Change 14052 on 2002/01/28 by jhoule@MA_JHOULE
Changed TX_FMT_* and VTX_FMT_* to plain FMT_*
Change 14008 on 2002/01/28 by bryans@bryans_crayola_win_cvd
   Initial high level description of DV environment for Video IP (DC)
Change 13999 on 2002/01/28 by gregs@gregs\_r400\_win\_marlboro
Added current serge control circuits and more info in general.
Change 13994 on 2002/01/28 by tho@tho r400 win
   updated dv status report
Change 13993 on 2002/01/28 by jasif@jasif r400 win tor
Updated Joveria's status.
Change 13979 on 2002/01/28 by efong@efong_r400_win_tor
Updated Status
Change 13969 on 2002/01/28 by rbell@rbell crayola win cvd
Changes
Change 13966 on 2002/01/28 by bryans@bryans crayola win cvd
  Add C++ test environment documents to depot
Change 13965 on 2002/01/28 by rbell@rbell_crayola_win_cvd
Added user model read/write commands
Change 13963 on 2002/01/28 by bryans@bryans_crayola_win_cvd
Update ifgen in schedule
```

```
Change 13948 on 2002/01/25 by chwang@chwang_r400_win_cvd
Added emulation coding standard and updated tutorial.
Change 13944 on 2002/01/25 by rvelez@rvelez r400 win tor
Changes based on 1/18 Interface Spec Review
Change 13942 on 2002/01/25 by rbell@rbell crayola win cvd
More changes
Change 13940 on 2002/01/25 by beiwang@bei mcspec
Updated the spec to include issues resolved after the spec review as well as other open
issues. Most of the changes are in pink. Also updated the bus interface description.
Updated the visio drawing on address format
Change 13939 on 2002/01/25 by tho@tho_r400_win
   updated test plan
Change 13933 on 2002/01/25 by scroce@scroce r400 win marlboro
Added info about Module Compiler support.
Change 13929 on 2002/01/25 by tho@tho_r400_win
   rom_controller_model_test_plan rev 0.2
Change 13890 on 2002/01/25 by jasif@jasif_r400_win_tor
Updated BIF RBBM interface to user new signal names. Added error checking section.
Fixed mistakes in top-level diagram.
Change 13884 on 2002/01/25 by wlawless@wlawless
just saving
Change 13860 on 2002/01/25 by rbell@rbell_crayola_win_cvd
Final version
Change 13823 on 2002/01/25 by jacarey@fl_jacarey
Checkpoint Specification
Change 13817 on 2002/01/24 by rbagley@MA RBAGLEY LTXP
```

```
Change 13816 on 2002/01/24 by rbagley@MA_RBAGLEY_LTXP
Intermediate checkin for version 0.1 of newly revised and reorganized shader
programming model doc. The doc had been
correctly renamed; the previous version is here deleted.
We also delete the former assembly syntax doc from its deprecated
location.
Change 13815 on 2002/01/24 by jasif@jasif_r400_win_tor
Updated
Change 13814 on 2002/01/24 by semara@semara r400 win tor
bif-vga doc
Change 13812 on 2002/01/24 by vromaker@MA\_VIC\_P4
update
Change 13809 on 2002/01/24 by jayw@MA_JAYW
wrong filename is RB_BlendLogic.doc
Change 13808 on 2002/01/24 by jayw@MA JAYW
more initial writings
Change 13787 on 2002/01/24 by wlawless@wlawless
just in case
Change 13761 on 2002/01/24 by jasif@jasif_r400_win_tor
Updated
Change 13739 on 2002/01/24 by jacarey@fl_jacarey
Note added to RBBM spec indicating that the RBBM_CNTL and RBBM_SOFT_RESET registers are
in the IO and MMR decode spaces.
Change 13709 on 2002/01/23 by efong@efong r400 win tor
```

Deleting obsolete version.

PLL model simulation model spec

```
Change 13693 on 2002/01/23 by jhoule@MA JHOULE
Diagrams showing multiple piecewise linear equations for the mipmap weight optimization
suggested.
Change 13692 on 2002/01/23 by jhoule@MA JHOULE
Changed SQ to better reflect it's a separate block.
Change 13690 on 2002/01/23 by jhoule@MA JHOULE
Drawing representing the texels used in a filter around a sample point.
Containt point/bilinear/4x4 filters.
Change 13689 on 2002/01/23 by jhoule@MA_JHOULE
R300 figures showing the wraping policies.
Change 13687 on 2002/01/23 by jhoule@MA JHOULE
0.9.3:
Updated interfaces to match current specs.
Added comments on various issues.
Described LOD optimization approach.
Added diagrams.
Change 13648 on 2002/01/23 by wlawless@wlawless
new block diagrams
Change 13646 on 2002/01/23 by rbell@rbell_crayola_win_cvd
Video IP archs and confs doc
Change 13637 on 2002/01/23 by chwang@chwang r400 win cvd
Another fix.
Change 13624 on 2002/01/23 by nluu@nluu r400 cnnb
   - update
```

Change 13623 on 2002/01/23 by jacarey@fl_jacarey

Clarification on Accessing IO and Memory-Mapped registers. These must have the same address.

Change 13617 on 2002/01/23 by nluu@nluu r400 cnnb

```
- update
Change 13603 on 2002/01/23 by chwang@chwang_r400_win_cvd
Emulation tutorial.
Change 13570 on 2002/01/22 by tho@tho_r400_win
   cursor & icon documents added
Change 13546 on 2002/01/22 by bryans@bryans_crayola_win_cvd
Update status 01/22/02
Change 13534 on 2002/01/22 by mzhu@mzhu_r400_win_tor
Remove CP DMIF read start signal, Add more timing diagrams.
Change 13521 on 2002/01/22 by jiezhou@jiezhou_r400_win_tor
updated Jan 22
Change 13514 on 2002/01/22 by askende@andi_r400_docs
new rev 1.2
Change 13512 on 2002/01/22 by askende@andi r400 docs
new rev.
Change 13476 on 2002/01/21 by rbeaudin@rbeaudin_r400_win_marlboro
UPDATED REGRESSION INSTRUCTIONS
Change 13474 on 2002/01/21 by askende@andi_r400_docs
new rev. 1.1
Change 13473 on 2002/01/21 by rthambim@rthambim_r400_win_tor
Initial Revision
Change 13471 on 2002/01/21 by askende@andi_r400_docs
new rev 1.1 of the shader pipe
Change 13465 on 2002/01/21 by askende@andi r400 docs
```

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first time check-in
Change 13449 on 2002/01/21 by vromaker@MA_VIC_P4
update
Change 13446 on 2002/01/21 by jacarey@fl_jacarey
Checkpoint Specifications
Change 13434 on 2002/01/21 by jayw@MA_JAYW
working documents on the alpha blend data path
Change 13427 on 2002/01/21 by frising@ma frising
-Moved Usage tabs towards back. I think this makes the spec a little more manageable
than the interleaved usages.
-no version change
Change 13422 on 2002/01/21 by jiezhou@jiezhou r400 win tor
major updated revision
Change 13421 on 2002/01/21 by jiezhou@jiezhou_r400_win_tor
spec update
Change 13397 on 2002/01/21 by jacarey@fl_jacarey
Update CP_DEBUG and CP_STAT register fields.
Change 13391 on 2002/01/21 by efong@efong r400 win tor
Put in Bif model document as well as the test_control_server and verilog document from
HW modelling
Change 13383 on 2002/01/21 by jacarey@fl jacarey
1. Outputs to VGT for 2D
2. Raster Order Determination for 2D Rectangles
Change 13380 on 2002/01/21 by chwang@chwang_r400_win_cvd
Updated.
```

Change 13372 on 2002/01/21 by tho@tho r400 win

```
upated status report
Change 13364 on 2002/01/21 by jasif@jasif_r400_win_tor
Updated status.
Change 13361 on 2002/01/21 by jacarey@fl_jacarey
Checkpoint Updates to 2D Appendix
Change 13356 on 2002/01/21 by efong@efong_r400_win_tor
Updated % done
Change 13347 on 2002/01/21 by rbell@rbell crayola win cvd
update
Change 13333 on 2002/01/18 by jacarey@fl_jacarey
Update Open Issues List
Update Go/Active Assertion Control Register
Change 13332 on 2002/01/18 by jacarey@fl jacarey
Document Double-Registered Discrete Signals for Better Chip Timing.
Change 13331 on 2002/01/18 by jacarey@fl_jacarey
Checkpoint CP Spec
Change 13327 on 2002/01/18 by tho@tho r400 win
  ROM controller model test plan
Change 13323 on 2002/01/18 by gregs@gregs r400 win marlboro
initial version, based on current designs.
Change 13318 on 2002/01/18 by beiwang@bei_mcspec
Things noted from the spec review.
Spec: Changes are highlighted in pink.
MCCI drawing: reduced the number of lines going into MH read bus mux
Change 13316 on 2002/01/18 by scroce@scroce_r400_win_marlboro
```

```
Added info about v2html support and new command line switches
Change 13308 on 2002/01/18 by jasif@jasif\_r400\_win\_tor
Updated signal interface list and top level diagram.
Change 13293 on 2002/01/18 by jowang@jowang R400 win
area estimation for Lili
Change 13281 on 2002/01/18 by khabbari@khabbari_r400_win
added columns to see if line buffer has enough bandwidth
Change 13272 on 2002/01/18 by rbeaudin@rbeaudin_r400_win_marlboro
doc update
Change 13268 on 2002/01/18 by rbell@rbell_crayola_win_cvd
Added ati mempak doc
Change 13263 on 2002/01/18 by rvelez@rvelez r400 win tor
Rev 1.1
Change 13255 on 2002/01/17 by mdoggett@MA_MDOGGETT_LT
Finished integrating and cleaning out old L1 spec details.
Change 13238 on 2002/01/17 by jacarey@fl_jacarey
Updated Size for Tag Memory and FIFO
Change 13235 on 2002/01/17 by askende@andi r400 docs
new rev.
Change 13231 on 2002/01/17 by askende@andi r400 docs
new shader rev of the shader spec checked in.
Change 13227 on 2002/01/17 by askende@andi_r400_docs
new rev of the shader spec
Change 13226 on 2002/01/17 by askende@andi_r400_docs
```

```
first time check-in
Change 13209 on 2002/01/17 by dglen@dglen_r400_dell
Some updates
Change 13184 on 2002/01/17 by nluu@nluu r400 cnnb
- update
Change 13179 on 2002/01/17 by nluu@nluu_r400_cnnb
   - RBBMIF block specs, timing and block diagrams
Change 13167 on 2002/01/16 by nluu@nluu_r400_cnnb
- edit
Change 13160 on 2002/01/16 by rbell@rbell_crayola_win_cvd
Another draft of the spec
Change 13143 on 2002/01/16 by nluu@nluu r400 cnnb
   - update rbbmif - autoreg spec
Change 13137 on 2002/01/16 by rbeaudin@rbeaudin_r400_win_marlboro
new R400 Emulator Specification
Change 13133 on 2002/01/16 by nluu@nluu_r400_cnnb
- update action items for RBBMIF
Change 13119 on 2002/01/16 by bryans@bryans_crayola_win_cvd
Update task list for week: 01/14/01
Change 13091 on 2002/01/15 by scroce@scroce r400 win marlboro
Changed some features. MKTREE is now disabled by default but can be enabled on Command
line. Also, incremental compile can now be disabled
Change 13085 on 2002/01/15 by jiezhou@jiezhou_r400_win_tor
delete
Change 13075 on 2002/01/15 by nluu@nluu r400 cnnb
```

```
- move interface doc to dc/Interface directory
Change 13074 on 2002/01/15 by rbell@rbell_crayola_win_cvd
Added the System Memory model
Change 13073 on 2002/01/15 by lseiler@ma_lseiler
revision 0.3, as checked in before Christmas
Change 13069 on 2002/01/15 by jasif@jasif_r400_win_tor
Initial revision for RBBM Model Document.
Change 13066 on 2002/01/15 by wlawless@wlawless
ok
Change 13059 on 2002/01/15 by jacarey@fl_jacarey
Checkpoint Specifications
Change 13058 on 2002/01/15 by llefebvr@llefebvre_laptop_r400
redondant opcodes corrected.
Change 13057 on 2002/01/15 by llefebvr@llefebvre laptop r400
There was a small error in the control flow section. Checked in the spec so that
Richard has a correct version to build the assembler on.
Change 13054 on 2002/01/14 by askende@andi_r400_docs
added for the first time
Change 13015 on 2002/01/14 by jayw@MA JAYW
Fixed visio drawing, try 2
Change 13013 on 2002/01/14 by lseiler@ma_lseiler
Version 0.7
Change 13011 on 2002/01/14 by bbloemer@ma-jasonh
Final update for release 0.7
```

Change 13010 on 2002/01/14 by jayw@MA JAYW

fixed typo in Figure 7: Pixel Format winin 2D Micro-Tiles wrong numeric bit positions

Change 13007 on 2002/01/14 by beiwang@bei mcspec

Mods to MEMCtl and MCProtocol drawings

Change 13006 on 2002/01/14 by beiwang@bei mcspec

Modifications to open issues, wordvalid field of access bus, tile+host queues depth, synchronization over valid&allocated bits of read data buffer, etc

Change 12989 on 2002/01/14 by yvalcour@yvalcour_r400_win_marlboro

fixed format and updated section 4.

Change 12984 on 2002/01/12 by beiwang@bei mcspec

- Drawings: Modified MCaddressformat dawing. Slight mod to MCordering. Added MCdramcmd drawing.
- Spec: Modified address format description. Modified description to MCP and added description to SW dram ${\sf cmd}$

Change 12983 on 2002/01/11 by nluu@nluu_r400_win

Change 12981 on 2002/01/11 by bbloemer@ma-jasonh

Another step closer to release 0.7

Change 12975 on 2002/01/11 by mdoggett@MA MDOGGETT LT

More updates on TCB, TCD, TCM, TCO and Formats, including document reorganisation and out dated sections removed

Change 12973 on 2002/01/11 by rvelez@rvelez_r400_win_tor

Line Buffer-Scaler Interface Spec

Change 12966 on 2002/01/11 by scroce@scroce_r400_win_marlboro

Document about the Build script

Change 12960 on 2002/01/11 by jacarey@fl_jacarey

Update Tag Memory Size

Change 12949 on 2002/01/11 by jowang@jowang_R400_win delete #2 Change 12947 on 2002/01/11 by $jowang@jowang_R400_win$ first draft after 1/10/02 review Change 12905 on 2002/01/11 by jhoule@MA JHOULE Current document is now R400_Texture_Pipe.doc Change 12880 on 2002/01/10 by rvelez@rvelez_r400_win_tor LB - Composite Pipe Interface Spec Change 12878 on 2002/01/10 by jiezhou@jiezhou r400 win tor initial release Change 12840 on 2002/01/10 by frising@ma frising Closed issue 1.) about mapping of signed normalized vertex data. No version change. Change 12839 on 2002/01/10 by jacarey@fl_jacarey Add diagram Change 12827 on 2002/01/10 by rbell@rbell_crayola_win_cvd Another draft. Change 12826 on 2002/01/10 by rbell@rbell crayola win cvd Additions Change 12824 on 2002/01/10 by jacarey@fl jacarey Fix Internal Bus Write Transaction Change 12809 on 2002/01/10 by jacarey@fl_jacarey Update RBBM Spec and Top-Level 1. CPQ DATA SWAP 2. NQ_WAIT_UNTIL

```
Change 12795 on 2002/01/10 by jacarey@fl_jacarey
Diagram Updates
Change 12786 on 2002/01/10 by jasif@jasif r400 win tor
Add Joveria's tasks.
Change 12774 on 2002/01/10 by jacarey@fl jacarey
Update diagrams
Change 12755 on 2002/01/09 by jacarey@fl_jacarey
Checkpoint Specifications
Change 12749 on 2002/01/09 by jhoule@MA_JHOULE
Put SQ in bold to indicate a separate block (beurk).
Change 12748 on 2002/01/09 by jhoule@MA JHOULE
Updated TC interfaces.
SP<--TC interface described.
Pre-filter FIFO more complete.
Minor corrections here and there.
Change 12728 on 2002/01/09 by dglen@dglen r400 dell
Updated OpenGL and started section on control of display pipe
Change 12723 on 2002/01/09 by mzhu@mzhu r400 win tor
DMIF-CP interface spec
Change 12708 on 2002/01/09 by llefebvr@llefebvre_laptop_r400
new revision of the sequencer spec v1.6
Change 12704 on 2002/01/09 by rbell@rbell_crayola_win_cvd
First draft of the DMIF simulation model spec.
Change 12691 on 2002/01/09 by nluu@nluu_r400_win
- update action items for rbbmif
Change 12690 on 2002/01/09 by yvalcour@yvalcour r400 win marlboro
```

```
add mc/mh test plan to correct location.
Change 12689 on 2002/01/09 by nluu@nluu_r400_win
   - rename doc
Change 12677 on 2002/01/09 by jacarey@fl_jacarey
Update CP RBIU Interfaces
Change 12667 on 2002/01/09 by nluu@nluu_r400_win
- action items for RBBMIF
Change 12661 on 2002/01/09 by rbeaudin@rbeaudin_r400_win_marlboro
update golden image release procedure
Change 12657 on 2002/01/09 by rbeaudin@rbeaudin_r400_win_marlboro
added regression information
Change 12631 on 2002/01/09 by rbeaudin@rbeaudin_r400_win_marlboro
new doc stuff
Change 12624 on 2002/01/08 by bbloemer@ma-jasonh
Partial Update for rev 0.6
Change 12621 on 2002/01/08 by rvelez@rvelez r400 win tor
DCC Interface-Client Spec
Change 12618 on 2002/01/08 by nluu@nluu_r400_win
   - name change
Change 12612 on 2002/01/08 by frising@ma_frising
fixed a spelling typo
Change 12611 on 2002/01/08 by frising@ma_frising
-remove cubemap opcode and add cubemap to DIM field.
-added a DIM 3D field to select between 3Da and 3Db sizes.
```

```
-replace references to state with constant
-rename base_offset to base_address
-rename sec_offset to mip_address
Change 12604 on 2002/01/08 by jacarey@fl jacarey
Update Strobes and Data from Internal CP Clients to RBIU
Change 12591 on 2002/01/08 by nluu@nluu r400 win
   - revised docs
Change 12589 on 2002/01/08 by dglen@dglen_r400_dell
Updated to current plan
Change 12586 on 2002/01/08 by jacarey@fl_jacarey
Checkpoint Updates for Registers
Change 12579 on 2002/01/08 by jiezhou@jiezhou r400 win tor
initial release
Change 12576 on 2002/01/08 by jiezhou@jiezhou r400 win tor
initial release
Change 12568 on 2002/01/07 by jiezhou@jiezhou_r400_win_tor
Initial release
Change 12560 on 2002/01/07 by vromaker@MA VIC P4
added info on remapping tables
Change 12557 on 2002/01/07 by jacarey@fl jacarey
Checkpoint Unit Specs
Change 12527 on 2002/01/07 by mmantor@mmantor_r400
added visio files for the Hardware state management document
Change 12509 on 2002/01/07 by nluu@nluu r400 win
```

- initial revision

```
Change 12488 on 2002/01/07 by jacarey@fl_jacarey
Clarify cp_rbiu register read bus.
Change 12486 on 2002/01/07 by jacarey@fl jacarey
Update CP and RBBM Interfaces
\ensuremath{\mathsf{RBBM}} can access up to 128K Bytes in the register space.
Change 12481 on 2002/01/07 by jacarey@fl jacarey
Updated Register Fields in CP Spec
Change 12472 on 2002/01/07 by frising@ma_frising
Update with OGL feedback.
Change 12464 on 2002/01/04 by rthambim@rthambim r400 win tor
Fixed syntax.
Change 12462 on 2002/01/04 by rthambim@rthambim r400 win tor
intial release
Change 12459 on 2002/01/04 by vromaker@MA_VIC_P4
added details to gpr allocation section
Change 12458 on 2002/01/04 by rbell@rbell_crayola_win_cvd
ROM Controller model spec.
Change 12444 on 2002/01/04 by kcorrell@kcorrell r400 docs marlboro
a few more details on some of the hardware aspects
Change 12433 on 2002/01/04 by wlawless@wlawless
nothing
Change 12423 on 2002/01/04 by frising@ma_frising
Fixed a typo
Change 12421 on 2002/01/04 by jhoule@MA JHOULE
Fixed typos (didn't even change version number)
```

Added features and caveats page. Resolved many of the open questions. Change 12412 on 2002/01/04 by mdoggett@MA MDOGGETT LT Added L2 data ready signal, removed TCB to TCM signal. Change 12406 on 2002/01/04 by mdoggett@MA MDOGGETT LT New version of TC spec. Updated discriptions and L1 and L2 access and decompression diagrams. Change 12395 on 2002/01/04 by rbell@rbell_crayola_win_cvd Added Toronto DV status Change 12335 on 2002/01/03 by llefebvr@llefebvre laptop r400 backup of the spec Change 12333 on 2002/01/03 by jacarey@fl jacarey Updates: RBIU, RCIU, and RTEE Sub-units Change 12332 on 2002/01/03 by jacarey@fl_jacarey Miscellaneous Updates to RTEE Diagram Change 12331 on 2002/01/03 by vromaker@MA_VIC_P4 fixed links (hopefully) Change 12330 on 2002/01/03 by jacarey@fl jacarey Add Internal Read Interfaces to RBIU Design Change 12318 on 2002/01/02 by jacarey@fl jacarey Update Memory Interface Unit Diagram Change 12317 on 2002/01/02 by jacarey@fl_jacarey Update cp_rciu Diagram

Change 12416 on 2002/01/04 by frising@ma_frising

Change 12315 on 2002/01/02 by jacarey@fl_jacarey

Checkpoint Change 12313 on 2002/01/02 by $scroce@scroce_r400_win_marlboro$ Information about dk system Change 12310 on 2002/01/02 by vromaker@MA VIC P4 HW Spec Change 12302 on 2002/01/02 by wlawless@wlawless just didn't want to lose my edits Change 12297 on 2002/01/02 by smorein@smorein_r400 adding updated docs to final resting place Change 12292 on 2001/12/31 by rbeaudin@rbeaudin_r400_win_marlboro Moved compliation of mc.cpp to top of DLL so that module can use DLL imports and exports. Added definitions for exporting Ferret functions. Change 12291 on 2001/12/31 by jiezhou@jiezhou_r400_win_tor updated Change 12290 on 2001/12/31 by jiezhou@jiezhou_r400_win_tor updated Change 12286 on 2001/12/31 by jiezhou@jiezhou r400 win tor Initial release Change 12280 on 2001/12/28 by frising@ma_frising Official v. 1.14. Add tables describing L2 interactions with texture, vertex, gamma, multicycle. Lots more clean up and clarifications. Started an open questions tab. Change 12277 on 2001/12/28 by pmitchel@pmitchel_r400_win_marlboro documenting partial release procedure

Change 12269 on 2001/12/28 by frising@ma_frising

another checkpoint Change 12268 on 2001/12/28 by jiezhou@jiezhou_r400_win_tor updated Change 12266 on 2001/12/27 by frising@ma frising This version of 1.14 is a checkpoint. Change 12259 on 2001/12/27 by jowang@jowang_R400_win test images Change 12256 on 2001/12/27 by rbeaudin@rbeaudin_r400_win_marlboro fixed error underlines Change 12222 on 2001/12/24 by rbell@rbell_crayola_win_cvd Added Perforce and building libs Change 12221 on 2001/12/24 by semara@semara_r400_win_tor adding ffirst release to the VGA display interface document updating the bif interface documents Change 12220 on 2001/12/24 by jiezhou@jiezhou r400 win tor Initial release Change 12219 on 2001/12/24 by jiezhou@jiezhou r400 win tor Initial release Change 12218 on 2001/12/24 by jowang@jowang_R400_win supports YCbCr and regression testing Change 12161 on 2001/12/21 by jacarey@fl_jacarey Check-In for the Holidays Change 12136 on 2001/12/21 by smorein@smorein_r400 added initial rom spec

Change 12121 on 2001/12/21 by jacarey@fl jacarey

```
Change 12089 on 2001/12/20 by lseiler@ma_travel_micro
Updated micro-tiling format and updates to the depth/stencil and multi-sample color
formats.
Change 12088 on 2001/12/20 by jacarey@fl jacarey
Checkpointing Specifications
Change 12085 on 2001/12/20 by jacarey@fl_jacarey
Fix Signals on RBBM Top Level diagram
Change 12080 on 2001/12/20 by jhoule@MA_JHOULE
3Db format: changed max value from 12 to 11 (saving 1 bit in tag helps TC logic to meet
area)
Change 12073 on 2001/12/19 by frising@ma frising
remove this crusty old thing.
Change 12058 on 2001/12/19 by frising@ma_frising
Added some more notes on alignment constraints + misc cleanup. Removed SAD opcodes.
Change 12053 on 2001/12/19 by semara@semara_r400_win_tor
update the directory content
Change 12052 on 2001/12/19 by semara@semara r400 win tor
update
Change 12047 on 2001/12/19 by jhoule@MA_JHOULE
Wrong opcode order in TFetch instruction usage
Change 12044 on 2001/12/19 by jhoule@MA_JHOULE
Changed opcode order.
Offsets are now 26 bits (64-byte aligned).
Comments added (LOD equation, DWORD computation)
```

Footer and common header added to keep track when printing.

Update

Change 12026 on 2001/12/19 by semara@semara_r400_win_tor first release Change 12025 on 2001/12/19 by semara@semara r400 win tor using # of pix to interface to the display Change 12024 on 2001/12/19 by semara@semara r400 win tor first release Change 12023 on 2001/12/19 by semara@semara_r400_win_tor add the files for first relaease Change 12022 on 2001/12/19 by $semara@semara_r400_win_tor$ update the block diagram Change 12016 on 2001/12/19 by semara@semara r400 win tor update top level diagram Change 12014 on 2001/12/19 by semara@semara r400 win tor vga top level block diagram first release Change 12012 on 2001/12/19 by $jowang@jowang_R400_win$ moved into Scaler directory Change 12010 on 2001/12/19 by $jowang@jowang_R400_win$ initial revision Change 12006 on 2001/12/19 by jowang@jowang R400 win initial revision Change 12004 on 2001/12/19 by jowang@jowang_R400_win initial design: 1-D separable filters, scaling Change 12000 on 2001/12/19 by jowang@jowang R400 win initial

Change 11999 on 2001/12/19 by lseiler@ma lseiler File check-in prior to vacation Change 11970 on 2001/12/18 by $jowang@jowang_R400_win$ initial design: 1-D filters for scaling Change 11953 on 2001/12/18 by paulv@MA PVELLA Minor fix. Change 11952 on 2001/12/18 by paulv@MA PVELLA Modifications to MHS to reflect new changes/fixes. Some other minor fixes throughout spec (mainly in tables). Change 11925 on 2001/12/18 by rbell@rbell crayola win cvd Updated doc Change 11923 on 2001/12/18 by jacarey@fl jacarey Small Text Character Mapping Diagram Change 11921 on 2001/12/18 by paulv@MA PVELLA Updated block diagram to reflect recent MH (and MC interface) changes. Change 11919 on 2001/12/18 by rbell@rbell_crayola_win_cvd Added docs for simulation Change 11915 on 2001/12/18 by scroce@scroce r400 win marlboro chmod the .cshrc Change 11914 on 2001/12/18 by scroce@scroce_r400_win_marlboro Remember to set P4CLIENT in UNIX setup Change 11911 on 2001/12/18 by scroce@scroce_r400_win_marlboro Reminded people to set \$EDITOR if they do not like vi Change 11895 on 2001/12/17 by askende@andi r400 docs

new updates of the spec with regards to ALU instruction word definition,

```
scalar opcode list and the hardware definition of the scalar unit.
Change 11885 on 2001/12/17 by jacarey@fl_jacarey
Updates to CP MIU Diagram
Change 11854 on 2001/12/17 by jacarey@fl jacarey
Misc.
Change 11839 on 2001/12/17 by jacarey@fl_jacarey
Interface Update for RCIU
Change 11833 on 2001/12/17 by llefebvr@llefebvre_laptop_r400
backup
Change 11824 on 2001/12/17 by lseiler@ma lseiler
PDF file for rev 0.4a RB register spec
Change 11820 on 2001/12/17 by rbeaudin@rbeaudin r400 win marlboro
fixed reference to regression test
Change 11819 on 2001/12/17 by rbeaudin@rbeaudin_r400_win_marlboro
fixed typo
Change 11810 on 2001/12/15 by frising@ma_frising
v. 1.11 Lots of misc clean-up, comments, and formatting.
Change 11793 on 2001/12/14 by jhoule@MA JHOULE
Changed filetype for exclusive check-out.
Change 11792 on 2001/12/14 by jhoule@MA JHOULE
New diagrams used in the TP spec.
Change 11791 on 2001/12/14 by jhoule@MA_JHOULE
Removed duplicate of top-level diagram.
Removed Addressing step (now part of TC).
Changed features.
Added SP TP diagram.
```

```
Changed filetype to exclusive open.
Rewrote Blending description (now contains Mark's LERPs with precision information).
Added Special Operations section for weird opcodes (Noise/Shadow/SADs/...)
Change 11790 on 2001/12/14 by jhoule@MA JHOULE
Changed formats cell height (printing issues).
New SIZE (with DIM in same DWORD) ==> 3da=10:10:10, 3db=12:12:41g
Added FETCH VALID ONLY for culling invalid pixels fetches (important for dependent
fetches).
Change 11785 on 2001/12/14 by lseiler@ma_lseiler
RB registers with review comments and preliminary register names
Change 11754 on 2001/12/14 by rbeaudin@rbeaudin r400 win marlboro
fix doc
Change 11752 on 2001/12/14 by wlawless@wlawless
Update Tile Logic section
Change 11747 on 2001/12/14 by mpersaud@mpersaud_r400_win_tor
Initial Revision
Change 11728 on 2001/12/13 by lseiler@ma lseiler
Register update for review
Change 11686 on 2001/12/13 by kcorrell@KCORRELL
update to version 6.3 of Memory Hub.doc
Change 11665 on 2001/12/13 by kcorrell@KCORRELL
updated RB - MC and MH - MC interface tables
Change 11540 on 2001/12/11 by jhoule@MA_JHOULE
Changed filetype (no multiple opens)
Change 11535 on 2001/12/11 by jhoule@MA_JHOULE
Now 4 DEGAMMA values.
Better DWORD equation (all automatic).
Added BORDER SIZE for border texels.
```

Moved SIGNED RF MODE before NUM FORMAT. Change 11528 on 2001/12/11 by scroce@scroce_r400_win_marlboro Trying to make Doc easier to follow. Change 11503 on 2001/12/11 by llefebvr@llefebvre laptop r400 Version 1.5 of the sequencer spec. See Revision changes of the document for details. Change 11484 on 2001/12/10 by scroce@scroce_r400_win_marlboro Clarified a few commands Change 11479 on 2001/12/10 by askende@andi_r400_docs new revision Change 11452 on 2001/12/10 by scroce@scroce r400 win marlboro Added the actual command lines to use the client template in UNIX Change 11443 on 2001/12/10 by llefebvr@llefebvre laptop r400 backup. Updated the constant memory management section by copying stuff from the R400 state management document by Mike Mantor. Change 11411 on 2001/12/07 by kryan@kryan r400 win marlboro Updated sanity test instructions to use perf_test.cpp. Change 11401 on 2001/12/07 by jhoule@MA JHOULE Minor modifs. Change 11399 on 2001/12/07 by jhoule@MA JHOULE Added usage tables. Minor modifications (e.g. no more WHICH DWORD since it uses Z instead but isn't there a problem for 3D hi-color textures?). Change 11393 on 2001/12/07 by llefebvr@llefebvre_laptop_r400

backup.

Change 11337 on 2001/12/06 by paulv@MA PVELLA

Made corrections/updates to MHS. Added new subsection (L2 Cache Invalidate Arbiter).

```
Change 11336 on 2001/12/06 by paulv@MA_PVELLA
Added Tags (I/O) and Sends (output). Changed buffer sizes. GMB = GRB.
Change 11335 on 2001/12/06 by paulv@MA PVELLA
Changed instances GMB to GRB.
Change 11329 on 2001/12/06 by wlawless@wlawless
new RB to MC interface
Change 11319 on 2001/12/06 by paulv@MA_PVELLA
Minor modification (mostly to DISP functional block).
Change 11306 on 2001/12/06 by llefebvr@llefebvre laptop r400
New revision of the sequencer spec.
Change 11287 on 2001/12/06 by ctaylor@fl ctaylor r400 win marlboro
Added Scan Converter Spec to P4
Change 11271 on 2001/12/06 by mpersaud@mpersaud_r400_win_tor
Added to depot - Needs major work
Change 11264 on 2001/12/05 by kcorrell@KCORRELL
updated to include top level description of GART and new MC interface.
Change 11241 on 2001/12/05 by rbeaudin@rbeaudin r400 win marlboro
fixed client spec
Change 11229 on 2001/12/05 by frising@ma_frising
Move TX/VTX const+inst to tp dir.
Change 11227 on 2001/12/05 by jhoule@MA_JHOULE
Renamed file for better consistency.
Change 11226 on 2001/12/05 by llefebvr@llefebvre laptop r400
Updated the register spec.
```

```
Change 11193 on 2001/12/05 by scroce@scroce_r400_win_marlboro
Fixed Capitalization issues in perforce client names
Change 11191 on 2001/12/05 by jacarey@fl jacarey
Context Allocation Flags
Change 11185 on 2001/12/04 by rbeaudin@rbeaudin_r400_win_marlboro
added more emulator documentation
Change 11096 on 2001/12/03 by mmantor@mmantor_r400
temp for backup purposes only
Change 11095 on 2001/12/03 by mmantor@mmantor r400
error in placement
Change 11093 on 2001/12/03 by mmantor@mmantor r400
Preliminary for back up only at current time
Change 11072 on 2001/12/03 by pmitchel@pmitchel_r400_win_marlboro
change tx to tp for consistency
Change 11070 on 2001/12/03 by pmitchel@pmitchel_r400_win_marlboro
adding directories to depot
Change 11063 on 2001/12/03 by pmitchel@pmitchel r400 win marlboro
delete
Change 11061 on 2001/12/03 by pmitchel@pmitchel_r400_win_marlboro
mv doc_lib/parts to doc_lib/design/blocks
Change 11056 on 2001/12/03 by wlawless@wlawless
version 0.4
Change 11055 on 2001/12/03 by jacarey@fl_jacarey
Submit so directory can be moved.
```

Change 11052 on 2001/12/03 by hartogs@fl_hartogs Interim check-in for move. Change 11049 on 2001/12/03 by kcorrell@KCORRELL temporary checkin to allow Paul to move things around again Change 11048 on 2001/12/03 by llefebvr@llefebvre laptop r400 submited for Paul to move stuff around again. Change 11047 on 2001/12/03 by askende@andi_r400_docs more updates Change 11006 on 2001/11/30 by scroce@scroce r400 win marlboro Addded some NT specific fixes Change 11004 on 2001/11/30 by scroce@scroce r400 win marlboro Clarified some of the directions Change 11002 on 2001/11/30 by pmitchel@pmitchel_r400_win_marlboro moving to r400/parts lib/ Change 10988 on 2001/11/30 by semara@semara_r400_win_tor add the vga doc to r400/doc lib/parts/vga Change 10974 on 2001/11/30 by jacarey@fl jacarey CP's General Purpose DMA Engine Change 10942 on 2001/11/29 by hartogs@fl_hartogs Updated the section for the VGT to Shader interfaces. Change 10936 on 2001/11/29 by jacarey@fl_jacarey Checkpoint CP Specifications Change 10889 on 2001/11/29 by jacarey@fl jacarey

Updates to CP Memory Interface Unit Diagram

```
Change 10879 on 2001/11/29 by jacarey@fl_jacarey
Baseline 2D Appendix for CP Spec (Separate Document)
Change 10852 on 2001/11/28 by scroce@scroce\_r400\_win\_marlboro
Added some more info on perforce setup
Change 10832 on 2001/11/28 by jacarey@fl jacarey
Diagram of 2D Surface Definitions
Change 10810 on 2001/11/27 by pmitchel@pmitchel_r400_win_marlboro
mv to doc lib/parts/sp
Change 10809 on 2001/11/27 by askende@andi r400 docs
new rev of the spec.
Change 10807 on 2001/11/27 by pmitchel@pmitchel r400 win marlboro
mv to doc_lib/parts
Change 10784 on 2001/11/27 by pmitchel@pmitchel_r400_win_marlboro
mv to doc lib/parts
Change 10774 on 2001/11/27 by llefebvr@llefebvre_laptop_r400_emu
opened the files with the wrong client
Change 10773 on 2001/11/27 by pmitchel@pmitchel r400 win marlboro
dlete
Change 10772 on 2001/11/27 by pmitchel@pmitchel_r400_win_marlboro
mv to doc_lib/parts
Change 10771 on 2001/11/27 by pmitchel@pmitchel_r400_win_marlboro
mv to doc_lib/parts
Change 10770 on 2001/11/27 by pmitchel@pmitchel r400 win marlboro
change filetype to +1
```

```
Change 10769 on 2001/11/27 by pmitchel@pmitchel_r400_win_marlboro
mv to doc_lib/parts
Change 10767 on 2001/11/27 by pmitchel@pmitchel_r400_win_marlboro
mv to doc_lib/parts
Change 10766 on 2001/11/27 by pmitchel@pmitchel r400 win marlboro
mv to doc_lib/parts
Change 10763 on 2001/11/27 by pmitchel@pmitchel_r400_win_marlboro
mv to doc lib/parts
Change 10752 on 2001/11/27 by scroce@scroce r400 win marlboro
Fixed up some menu issues
Change 10738 on 2001/11/27 by pmitchel@pmitchel r400 win home
creation of spec areas
Change 10732 on 2001/11/27 by pmitchel@pmitchel_r400_win_home
rename into parts/cp & parts/rbbm
Change 10717 on 2001/11/26 by jacarey@fl_jacarey
Check-In for Moving of Document Area
Change 10705 on 2001/11/26 by pmitchel@pmitchel r400 win marlboro
another rename to match r300
Change 10699 on 2001/11/26 by pmitchel@pmitchel_r400_win_marlboro
doing rename properly
Change 10698 on 2001/11/26 by pmitchel@pmitchel_r400_win_marlboro
fix mistake
Change 10697 on 2001/11/26 by pmitchel@pmitchel r400 win marlboro
recover
```

```
Change 10695 on 2001/11/26 by pmitchel@pmitchel_r400_win_marlboro
rename
Change 10693 on 2001/11/26 by llefebvr@llefebvre_laptop_r400 \,
closing for Paul to move files around
Change 10691 on 2001/11/26 by pmitchel@pmitchel r400 win marlboro
rename "blocks" to "parts lib"
Change 10676 on 2001/11/26 by llefebvr@llefebvre_laptop_r400
changed the file type to binary and locked
Change 10675 on 2001/11/26 by llefebvr@llefebvre laptop r400
\ensuremath{\mathsf{new}} spin on the other documents regarding the sequencer spec
Change 10674 on 2001/11/26 by llefebvr@llefebvre laptop r400
new spin on the sequencer spec
Change 10673 on 2001/11/26 by pmitchel@pmitchel_r400_win_marlboro
test
Change 10666 on 2001/11/26 by scroce@scroce_r400_win_marlboro
Added info regarding the toold menu in p4win
Change 10644 on 2001/11/26 by pmitchel@pmitchel r400 win marlboro
deleting
Change 10632 on 2001/11/26 by jacarey@fl_jacarey
Checkpoint CP Specifications
Change 10396 on 2001/11/20 by rbeaudin@rbeaudin_r400_win_marlboro
new directions
Change 10365 on 2001/11/20 by pmitchel@pmitchel r400 win marlboro
adding file
```

```
Change 10333 on 2001/11/19 by pmitchel@pmitchel_r400_win_marlboro
release
Change 10318 on 2001/11/19 by rbeaudin@rbeaudin_r400_win_marlboro
more reg release changes
Change 10294 on 2001/11/19 by pmitchel@pmitchel r400 win marlboro
checkpoint
Change 10281 on 2001/11/19 by rbeaudin@rbeaudin_r400_win_marlboro
more instructions for changing block files
Change 10199 on 2001/11/16 by jacarey@fl jacarey
Checkpoint CP Specs
Change 10157 on 2001/11/16 by jacarey@fl jacarey
RBBM Version 0.04 Specification Release.
Change 10156 on 2001/11/16 by pmitchel@pmitchel_r400_win_home
change filetype
Change 10153 on 2001/11/16 by pmitchel@pmitchel_r400_win_home
initial checkin
Change 10151 on 2001/11/16 by jacarey@fl jacarey
Update Multi-target Slow Client Diagram
Change 10149 on 2001/11/16 by jacarey@fl_jacarey
Single Slow Client Waveform
Change 10144 on 2001/11/16 by jacarey@fl_jacarey
Update RT stream Event Engine Diagram
Change 10114 on 2001/11/16 by pmitchel@pmitchel r400 win marlboro
changed file types to disallow multiple edits
```

Change 10112 on 2001/11/16 by pmitchel@pmitchel_r400_win_marlboro added explicit sync to release label as part of windows setup Change 10053 on 2001/11/15 by jacarey@fl jacarey Add RBBM Diagrams to Perforce Change 10042 on 2001/11/15 by jacarey@fl jacarey Checkpoint RBBM Specification Change 10031 on 2001/11/15 by rbeaudin@rbeaudin_r400_win_marlboro schedules Change 9986 on 2001/11/15 by jacarey@fl jacarey Diagram for Real-Time Stream Event Engine. Change 9903 on 2001/11/14 by jacarey@fl jacarey Update to RBBM Top-Level Diagram (Interfaces) Change 9896 on 2001/11/14 by jacarey@fl_jacarey Update RBBM Top-Level Per Interfaces Change 9883 on 2001/11/14 by jacarey@fl_jacarey Diagram of CP's Interface to Register Backbone. Change 9882 on 2001/11/14 by jacarey@fl jacarey Update FIFO widths and depths for write interface. Change 9878 on 2001/11/14 by jacarey@fl_jacarey Update to CP's Memory Interface Unit (MIU) Diagram 1. Added Write Confirm Signal 2. Removed i's and o's from Interface Signals Change 9872 on 2001/11/14 by jacarey@fl_jacarey Update CP's View of Instruction Memory

Checkpoint other CP Specs

Change 9724 on 2001/11/12 by scroce@scroce_r400_win_marlboro Clarified some instructions. Change 9720 on 2001/11/12 by scroce@scroce_r400_win_marlboro Made setup doc instructions for perforce client more explicit Change 9710 on 2001/11/12 by scroce@scroce r400 win marlboro Fixed client spec naming from _unix_ to _sun_ Change 9646 on 2001/11/09 by jacarey@fl jacarey CP's View of Instruction Memory Change 9561 on 2001/11/08 by $scroce@scroce_r400_win_marlboro$ Added some commands to build the emulator once things are set up Change 9522 on 2001/11/08 by scroce@scroce r400 win marlboro Document about the new DK_* Environment we will be using for R400 Change 9517 on 2001/11/08 by jacarey@fl jacarey Revision 0.03 for Preliminary Review Change 9493 on 2001/11/08 by jacarey@fl_jacarey Checkpoint Revision 0.02 of the PM4 Specification Change 9278 on 2001/11/06 by jacarey@fl jacarey Update to RBBM Top-Level Diagram (Index DMA Request Path) Change 9277 on 2001/11/06 by jacarey@fl jacarey Update CP Interface Diagrams. Change 9214 on 2001/11/05 by jacarey@fl_jacarey Checkpoint Updates to CP Spec and PM4 Spec: 1. Viz Query 2. Removal of Obsolete Draw Packets 3. Add DRAW INDX and VIZ QUERY packets

Add MPEG_INDEX packet.
 Some Updates for RT streams

Change 9156 on 2001/11/05 by jacarey@fl_jacarey Updates to CP's Memory Interface Unit Diagram Change 9067 on 2001/11/02 by jacarey@fl jacarey Checkpoint CP Spec Change 9045 on 2001/11/02 by jacarey@fl jacarey Diagram addition of Shader Instruction Fetch Path through RBBM. Change 9028 on 2001/11/01 by jacarey@fl_jacarey Checkpoint All RBBM and CP Documents and Diagrams. Change 9022 on 2001/11/01 by jacarey@fl jacarey Update RCIU Change 9014 on 2001/11/01 by jacarey@fl jacarey Update CP's MIU diagram per 32-bit interface POR. Change 9001 on 2001/11/01 by jacarey@fl_jacarey Rename CP-to-RBBM Interface Change 8999 on 2001/11/01 by jacarey@fl_jacarey Diagram of CP-to-RBBM Interface Unit Change 8988 on 2001/11/01 by jacarey@fl jacarey Diagram of Index DMA Engine in CP for the PA. Change 8597 on 2001/10/26 by pmitchel@pmitchel_iris fixed tabular state machine description Change 8595 on 2001/10/26 by pmitchel@pmitchel_iris added dff vs always description Change 8571 on 2001/10/26 by pmitchel@pmitchel iris

changed filetype to exclusive edit

Change 8551 on 2001/10/26 by bbloemer@ma-jasonh
Release with updates from review meetings.

Change 8369 on 2001/10/24 by rbeaudin@MA_RAYB

moved location of autoreg doc

Change 8332 on 2001/10/24 by rbeaudin@MA_RAYB

more doc info

Change 8286 on 2001/10/23 by jacarey@fl_jacarey

Checkpoint CP & RBBM Requirements Matrix

Change 8283 on 2001/10/23 by jacarey@fl_jacarey

Checkpoint of All CP Specs (Not Complete)

Checkpoint RBBM Spec:

- 1. Byte-Enables are now: BE
- 2. Clarifications on CP "non-queued" data path.

Change 8282 on 2001/10/23 by jacarey@fl jacarey

Change 8280 on 2001/10/23 by rbeaudin@MA RAYB

added new block interfaces

Change 8200 on 2001/10/22 by bbloemer@ma-jasonh

Some of the changes from the style guide meetings.

Change 8170 on 2001/10/22 by jacarey@fl_jacarey

Baseline Beginnings of Stream Fetcher Diagram

Change 8153 on 2001/10/22 by jacarey@fl_jacarey

Update CP Memory Interface Unit Diagram.

Change 8111 on 2001/10/19 by jacarey@fl_jacarey

Memory Hub Interface Unit Diagram for CP.

Change 8050 on 2001/10/18 by jacarey@fl_jacarey

RBBM Specification Version 0.02 Checkpoint CP Specification and PM4 Specification Change 7703 on 2001/10/12 by jacarey@fl_jacarey Update Interrupt Registers in the CP. Change 7667 on 2001/10/12 by jacarey@fl jacarey Checkpoint write-up of interrupt generation. Change 7554 on 2001/10/10 by jacarey@fl_jacarey Updated some state PM4 packets -- Checkpoint of document. Change 7420 on 2001/10/08 by jacarey@fl_jacarey Incremental Update Change 7290 on 2001/10/04 by rbeaudin@Crayola NT Emu more doc Change 7242 on 2001/10/03 by rbeaudin@MA RAYB numbers library Change 7231 on 2001/10/03 by rbeaudin@Crayola_NT_Emu more docs Change 7224 on 2001/10/03 by rbeaudin@MA RAYB new doc stuff Change 7185 on 2001/10/02 by rbeaudin@MA RAYB corrected documentation Change 6992 on 2001/09/27 by rbeaudin@MA_RAYB more doc stuff Change 6989 on 2001/09/27 by rbeaudin@MA RAYB more doc stuff

Change 6970 on 2001/09/26 by jacarey@fl_jacarey

Lots of Update on:

- 1. Real-Time Stream Algorithm and Description
- 2. State Management Processing

Updated requirement matrix for CP.

Change 6859 on 2001/09/24 by rbeaudin@MA_RAYB

more doc stuff

Change 6840 on 2001/09/24 by jacarey@fl_jacarey

Add CP/RBBM Requirements Matrix to Perforce

Change 6839 on 2001/09/24 by jacarey@fl_jacarey

Checkpoint On-Going Updates to Documents.

Change 6832 on 2001/09/24 by rbeaudin@MA RAYB

doc update

Change 6757 on 2001/09/20 by jacarey@fl_jacarey

CP Spec:

- 1. Added registers for Real-Time Event Engine Control $\,$
- 2. Added some registers for state management control

PM4 SPec:

- 1. Updated text for the state management packets.
- 2. Updated text for synchronization packets.

Change 6739 on 2001/09/20 by rbeaudin@MA_RAYB

more documentation

Change 6724 on 2001/09/20 by rbeaudin@Crayola_NT_Emu

more documentation

Change 6529 on 2001/09/14 by ccoveney@chrisc_r400_docs

Finished this most of the way up.. may still need to correct some things but this is the fairly close to final version

```
Change 6478 on 2001/09/14 by rbeaudin@MA RAYB
new doc
Change 6438 on 2001/09/13 by rbeaudin@MA RAYB
emulator documentation
Change 6425 on 2001/09/13 by sallen@ma sallen
Final update. Needs cons information...
Change 6274 on 2001/09/10 by ccoveney@chrisc_r400_docs
Added description and screenshots of how to change clients in perforce
Change 6252 on 2001/09/10 by ccoveney@chrisc_r400_docs
This file has a short description of some specific details that help out with running
perforce integrated with Developer Studio.
Change 6251 on 2001/09/10 by ccoveney@chrisc r400 docs
This is the documentation file for using the new parameterized test library that's
found in //depot/r400/verification/param test
Change 6091 on 2001/09/05 by jacarey@fl_jacarey
General Checkpoint of Documentation
Change 5365 on 2001/08/15 by pmitchel@pmitchel_iris
changed `define section
Change 5275 on 2001/08/13 by pmitchel@pmitchel iris
fixed `define section
Change 5141 on 2001/08/08 by pmitchel@pmitchel test client
add
Change 5136 on 2001/08/08 by bbloemer@ma-jasonh
More coding guidelines stuff.
```

Change 5129 on 2001/08/08 by pmitchel@pmitchel_test_client

new rev

```
Change 4359 on 2001/07/16 by askende@andi_docs
new rev
Change 4207 on 2001/07/11 by askende@andi docs
new rev
Change 4206 on 2001/07/11 by askende@andi docs
fixed a few typos
Change 4162 on 2001/07/10 by askende@andi_docs
new rev of the hardware spec
Change 4033 on 2001/07/06 by askende@andi docs
update of the specs
Change 3988 on 2001/07/05 by jacarey@fl jacarey
Initial Baseline from R300 plus listing of some open items.
Change 3980 on 2001/07/05 by jacarey@fl_jacarey
Baseline PM4 Packet Spec for CP from R300 (Khan)
** Note: Entire document may become obsolete or be revised depending
        on architecture decisions for the CP ***
Change 3979 on 2001/07/05 by jacarey@fl jacarey
Baseline R300's CP Test Bus Spec for R400
Change 3975 on 2001/07/05 by jacarey@fl jacarey
Baseline RBBM Unit Spec and Test Bus Document from R300.
Included sections from the R400 RBBM Spec.doc in the ../arch/chip area.
** Document is Initial Version ONLY - Lot of work is still required **
Change 3446 on 2001/06/12 by smorein@smorein_r400
simple update, need to do a more complete update
Change 3445 on 2001/06/12 by smorein@smorein_r400
```

added old version of chip presentation

Change 3428 on 2001/06/11 by $smorein@smorein_r400$

Adding a bunch of files

Change 2709 on 2001/05/09 by sallen@ma sallen

add testenv spec

Change 2679 on 2001/05/09 by ccoveney@chrisc_r400

added some possible command descriptions and a sample header from the $pp6_blend_all_param.dat$ file

Change 2651 on 2001/05/08 by ccoveney@chrisc_r400

proofread and updates a few things

Change 2650 on 2001/05/08 by ccoveney@chrisc_r400

This file contains the proposal for the new parameterized test methodology that will implemented for R400 verification.

Change 400 on 2000/11/01 by pmitchel@_pmitchel

Initial creation of r400 area under //depot