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**PROVISIONAL APPLICATION FOR PATENT COVER SHEET – Page 1 of 2**

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

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INVENTOR(S)		
Given Name (first and middle [if any])	Family Name or Surname	Residence (City and either State or Foreign Country)
Venkat	Konda	San Jose, CA
Additional inventors are being named on the _____ separately numbered sheets attached hereto		
<b>TITLE OF THE INVENTION (500 characters max):</b>		
VLSI LAYOUTS OF FULLY CONNECTED GENERALIZED NETWORKS WITH LOCALITY EXPLOITATION		
<b>Direct all correspondence to: CORRESPONDENCE ADDRESS</b>		
<input checked="" type="checkbox"/> The address corresponding to Customer Number:		38139
<b>OR</b>		
<input type="checkbox"/> Firm or Individual Name		Teak Networks, Inc.
Address 6278, Grand Oak Way		
City San Jose	State CA	Zip 95135
Country USA	Telephone 408-472-3273	Email venkat@teaknetworks.com
<b>ENCLOSED APPLICATION PARTS (check all that apply)</b>		
<input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76		<input type="checkbox"/> CD(s), Number of CDs _____
<input checked="" type="checkbox"/> Drawing(s) Number of Sheets <u>26</u>		<input type="checkbox"/> Other (specify) _____
<input checked="" type="checkbox"/> Specification (e.g. description of the invention) Number of Pages <u>62</u>		
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<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.		<b>TOTAL FEE AMOUNT (\$)</b>
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PTO/SB/16 (02-07)

Approved for use through 02/28/2007. OMB 0651-0032

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SIGNATURE \_\_\_\_\_ Date 11/1/2007

TYPED or PRINTED NAME Venkat Konda REGISTRATION NO. \_\_\_\_\_  
(if appropriate)

TELEPHONE 408-472-3273 Docket Number: M-0046 US

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**VLSI LAYOUTS OF FULLY CONNECTED GENERALIZED NETWORKS  
WITH LOCALITY EXPLOITATION**

**Venkat Konda**

5 **CROSS REFERENCE TO RELATED APPLICATIONS**

This application is related to and incorporates by reference in its entirety the U.S. Provisional Patent Application Docket No. M-0037US entitled "FULLY CONNECTED GENERALIZED MULTI-STAGE NETWORKS" by Venkat Konda assigned to the same assignee as the current application, filed May 25, 2007.

- 10 This application is related to and incorporates by reference in its entirety the U.S. Provisional Patent Application Docket No. M-0038US entitled "FULLY CONNECTED GENERALIZED BUTTERFLY FAT TREE NETWORKS" by Venkat Konda assigned to the same assignee as the current application, filed May 25, 2007.

- 15 This application is related to and incorporates by reference in its entirety the U.S. Provisional Patent Application Docket No. M-0039US entitled "FULLY CONNECTED GENERALIZED REARRANGEABLY NONBLOCKING MULTI-LINK MULTI-STAGE NETWORKS" by Venkat Konda assigned to the same assignee as the current application, filed May 25, 2007.

- 20 This application is related to and incorporates by reference in its entirety the U.S. Provisional Patent Application Docket No. M-0040US entitled "FULLY CONNECTED GENERALIZED MULTI-LINK BUTTERFLY FAT TREE NETWORKS" by Venkat Konda assigned to the same assignee as the current application, filed May 25, 2007.

- 25 This application is related to and incorporates by reference in its entirety the U.S. Provisional Patent Application Docket No. M-0041US entitled "FULLY CONNECTED GENERALIZED FOLDED MULTI-STAGE NETWORKS" by Venkat Konda assigned to the same assignee as the current application, filed May 25, 2007.

This application is related to and incorporates by reference in its entirety the U.S. Provisional Patent Application Docket No. M-0042US entitled "FULLY CONNECTED GENERALIZED STRICTLY NONBLOCKING MULTI-LINK MULTI-STAGE NETWORKS" by Venkat Konda assigned to the same assignee as the current application,  
5 filed May 25, 2007.

This application is related to and incorporates by reference in its entirety the U.S. Provisional Patent Application Docket No. M-0045US entitled "VLSI LAYOUTS OF FULLY CONNECTED NETWORKS" by Venkat Konda assigned to the same assignee as the current application, filed May 25, 2007.

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#### BRIEF DESCRIPTION OF DRAWINGS

FIG. 1A is a diagram 100A of an exemplary symmetrical multi-link multi-stage network  $V_{fold-link}(N, d, s)$  having a variation of inverse Benes connection topology of nine stages with  $N = 32$ ,  $d = 2$  and  $s=2$ , strictly nonblocking network for unicast connections and rearrangeably nonblocking network for arbitrary fan-out multicast connections, in accordance with the invention.  
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FIG. 1B is a diagram 100B of the equivalent symmetrical folded multi-link multi-stage network  $V_{fold-link}(N, d, s)$  of the network 100A shown in FIG. 1A, having a variation of inverse Benes connection topology of five stages with  $N = 32$ ,  $d = 2$  and  $s=2$ , strictly nonblocking network for unicast connections and rearrangeably nonblocking network for arbitrary fan-out multicast connections, in accordance with the invention.  
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FIG. 1C is a diagram 100C layout of the network  $V_{fold-link}(N, d, s)$  shown in FIG. 1B, in one embodiment, illustrating the connection links belonging with in each block only.

FIG. 1D is a diagram 100D layout of the network  $V_{fold-link}(N, d, s)$  shown in FIG. 1B, in one embodiment, illustrating the connection links  $ML(1,i)$  for  $i = [1, 64]$  and  $ML(8,i)$  for  $i = [1, 64]$ .  
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