Exhibit U

From:	Peter C. Hart <peterhart@measuright.com>
Sent:	Tuesday, October 20, 1998 10:16 AM
To:	Tom Biddulph <bid@skyweyr.com>
Cc:	Jeffrey Schneider <JeffreyS@dnai.com>; Rich at Trademan <rich@trademan.com>
Subject:	Re: Alternative Trading Board Design

Tom Biddulph wrote:

> I've been thinking much more about your proposal. Here are some questions that I need the answer to before I can give an initial technical estimate:
>
> 1. Are the height of the different stacks related (of the same scale)? In other works, is a stack that represents an aggregate quantity of 100 1/10th the height of a stack that represents an aggregate quantity of 1000?

I believe we can have a relation that is one to one or logarithmic. One to one is much, much more desirable if that is feasible. In discussing this yesterday with Rich, he indicated that order quantities tend to follow conventional increments within a manageable range between largest and smallest. No one puts in one unusually large order because it has an impact on price that is adverse to the orderer's interests.

It is okay to run order stacks off the screen as long as the trader has the ability to zoom the whole board in and out and to scroll. Another way to deal with display real estate is to limit the size of a stack to the available screen space or another similar limit and if the stack for a particular price wants to be too tall, create one or more others beside it to the left. Adopt for now whatever is easier to code.

> 1. What is the approximate data model for orders? The they occurring frequently? What type of spreads are likely to occur? Will there be a wide variance in prices?

Boy, I really like this question. I think it would be very helpful for the testing of any board design to have a test routine or simulation that is driven by the parameters of what we think will be the typical range of trader activity in a day or hour for a particular product. It would be wonderful if we could set those parameters. Here is my starter list:
1. Price scale - high, low, median and increments
2. Order quantity - high, low, average and increments
3. Number of orders and transactions per hour
4. Spread - narrow and wide points
5. Time limit - long, short, average

The simulation should not just propogate orders but also transactions so the board doesn't get unnaturally cluttered.

> 1.
> 2. For the graph lines (both the actual PIT data and the indicator data), are these graphs behind or in front of the stacks (or should this be user settable)?

They could be user controllable, but that doesn't seem to gain very much. To start, I would place them in front. They don't seem to interfere. You might make a particular order stack a user is examining (mouse over or selected) go to the front temporarily.

1.
2. What are the characteristics of an order (price, quantity, expiration time, market/limit, ...)?

I think Rich indicated that we no longer have market orders in our pits. Orders are either time limited or take outs. The rest of your question is the same, I think, as the parameters I would like us to be able to set to run demos, tests and experiments.

1.

That's all for now, although I'm sure there will be others. An issue to start thinking about is if you'd like me to do a quick mock-up of the display. I actually think I can have the major components of it put together and functioning in a day or two. It won't be totally funcitonal at that point, but it would give you a good idea of what its going to look like and function. It would be "live", in the sense that it would display the trading data being generated by an "autopropagate of orders" and by real input orders made by an individual at a screen. Of course, the setting up of "scenarios" and trying to come up with a more real "order flow" or "auto order generation algorithm" still needs to happen..... -bid-

I think it would be very helpful for both design and demo purposes of all board designs and pit products to have an auto-propagate that is parameter driven and includes both orders and transactions. How much of an effort do you think that would be to develop?

Whether you should spend two days to do a mock-up of the alternative design, I'll leave for Rich to decide I'm biased. Maybe Rich will give the go ahead when I get a mock-up of the Business Plan done. :-)
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Peter C. Hart
53 Oakdale Avenue
San Rafael, CA 94901-1353

Tel. (415) 459-6386
Fax. (415) 459-0884