

LAVA User Group Meeting

Ontario Minutes

November 12, 2002.

The First LAVA LabVIEW Advanced Virtual Architects meeting for Ontario was held. The meeting started at 6pm with food. The following attendees were present:

Ben Zimmer	Navtej Rehal
Jamie Aiello	Doug Mumford
Michael Aivaliotis	Dean Mills
Paul Hennessy	Ted White
Graeme Hartlen	Sam Behashte

Michael Aivaliotis, the regional host, went through an outline of what LAVA was all about. The presentation can be found [here](#). It covered topics including how LAVA originated, what need LAVA fills and how it fits in with the NI user groups and seminars.

The main topic of discussion was about event structure usage in LabVIEW. All of the attendees had, at some point or another worked with event structures and were tackling the issues of implementation. A presentation by Michael Aivaliotis showed how he used event structures in some of his applications, you can find it [here](#). Before and after images were used to show the improvement in the readability and usage of the code. The main focus toward the end of the presentation was how to integrate non-user interface events into the event structure. Michael's presentation showed how he uses a parallel loop which handles user interface events, this in turn passes a message via a queue to another main execution loop which handle all the bulk of the work. This main loop can accept messages from the Event loop OR from another process (hardware or dynamic vi).

Several comments were made from others that they prefer to use one main loop and in order to handle non UI events they poll them in the Timeout case of the event structure.

Dean Mills continued the presentation with a display of some of his code which shows how he implements handling queues and front panel events in one loop. The timeout case is used here, and there the contents of the queue is checked. If a new queue message is found then it is processed and handled otherwise the event loop sleeps again. Several other people agreed to using this method as it reduces diagram size and focuses you attention on one loop. Another reason to combine event queues in one loop was so that if NI later on came up with dynamic event implementation, then existing code could be easily migrated over.

Some suggested improvements to the event structure from Sam Behashte and Paul Hennessy was the ability to pass a vi reference to an event structure embedded in a sub-vi. This way you could clean up the diagram by embedding an event structure into a sub-VI yet still handling events for the assigned VI.

The OpenG (open LabVIEW source) movement was brought up in the meeting. One set of VI's which was presented as something that could be useful was the Variant Config

File IO vi's. Questions were raised as to how the functions handled changes to the cluster definition. Were the old config files read in properly and if not how was error handling established. Where default values assigned etc.

People were encouraged to join in the openg movement and look at what requirements there are for utilities or toolkits that do not exist anywhere else. Some showed interest for the OSTE, open source test executive.

Sam Behashte mentioned that he is looking for solution that will give him the call chain of a dynamic vi. No solutions yet were found but various discussions on possible solutions were mentioned. The main rationale for doing this was to find a way to center a dynamically called vi on the panel of the vi who called it. This is useful for VI's running on multiple monitors.

In conclusion, the meeting was a success. The meeting was considered useful by all who attended. Attendees commented how it was a good idea to have the LAVA group and that it opened up new opportunities to exchange ideas and network between experienced LabVIEW developers. The discussion was at a high enough level as to attract a good following.

The meeting was adjourned at around 8:30pm.. An attempt will be made to have another meeting by mid January. After the meeting several attendees visited a local restaurant where discussions of LabVIEW continued on into the wee hours of the night...

Some future topic discussions were suggested:

- Leveraging the power of Ctrl references.
- Message notification (queues) over the network between applications. Is it possible and if not what implementations are available.
- Handling and manipulating large amounts of data within a LabVIEW application.

Michael Aivaliotis
Ontario Regional LAVA Host