

DSDP – TM Conference Call, 18-July-2005

Meeting Notes

Attendees:

Wind River – Salzburg, Austria

Martin Oberhuber – WR Technical lead for DSDP-Target Manager

IBM

Dave Dykstal – Remote System Explorer (RSE)

Intel

Peter Lachner – Manages XScale component tools project; currently compiler tools

LANL

Greg Watson – PTP Tools Project Lead (at Los Alamos National Lab)

MontaVista

Pierre-Alexandre Masse – wrote the Bugzilla 65471 RSF framework

Brian Eliot – Will re-organize MontaVista's internal code to use RSF

Melissa Traynor – Manages the IDE group at Montavista

PalmSource

Robert O'Brien – Have CDT-Based IDE for developing PalmOS applications

Ewa Matejska

TI

Chris Recoskie – Code Composer Essentials and Studio products, mostly JTAG

Martin Inrisek

Dorin Alexey

Original Agenda

- Any new participants, "who is who"
- Online demo of current systems?
- Recent News
 - MontaVista's drop of RSF
 - Scott Lewis working on FTP SharedObject in ECF
 - IBM RSMT at <http://www.alphaworks.ibm.com/tech/rsmt> (based on STAF)
- Discussions regarding TM Design
- Next steps
- Resources

Meeting Notes

Martin O. opens the call and asks attendees who had not joined the first TM call to introduce themselves (see attendee list above).

New Participants – Parallel Tools Platform (PTP)

Greg W: PTP project trying to develop tools for the "Best Practice" with parallel programs. About 4 people at LANL working on the project full time; IBM have some more people; parallel programs are always remote, thus there is a need for target management. So far, PTP developed several models:

- Runtime Model represents a parallel machine & its status, instantiated & updated as soon as switched to the parallel perspective. When a parallel job is launched, processes associated with the job are shown in that model. Have some views associated with the model.
- Debug Model – An extension of the CDT CDI Debug Model.

Martin O: How to get the code? – Greg: Snapshot of PTP to be released soon; ptp.core might be most interesting; Need Eclipse 3.1 and CDT. Some external infrastructure required to make up the infrastructure about machines etc – currently working with Open RTE (Part of Open MPI) High Level Interface + JNI

New Participants – PalmSource

Have CDT-Based IDE for developing PalmOS applications, currently single-process. Need a multi-process solution: Switching from monolithic Kernel to Linux Kernel, thus a lot more processes.

Presentations:

No presentations this time, reserved another slot for the next call on August 8. Will invite QNX and others who want to present.

MontaVista's drop of RSF

Brian E: RSF is not complete; Future work will be dedicated to use the RSF; Abstractions in RSF are a result of learning with the prior implementation; had multiple communication channels supporting the same application service (e.g. gdb via IP or Serial; Terminal Emulator) Saw the need to decouple application service from the lower level; no additional experience yet. Flexibility means additional complexity in the UI, but want to go that way.

Greg W: Documentation associated with RSF? – Brian: Not much docu with the original drop, will search for additional internal design docs etc.

Greg W: Remote Build covered by RSF? – Brian: RSF originally for embedded, remote build not yet explored but others thought RSF could be useful. IBM RSE seems to have more provisioning for remote build.

Greg W: We now have several different starting points for DSDP-TM, how are we going to get together the various projects? – Martin O: Had started the Use Cases to explore the big picture of what we need, we should base work on the most flexible and versatile framework that can encompass all use cases.

Other News

Scott Lewis working on ECF FTP implementation, to showcase ECF driving stock protocols. Got RSF drop to integrate an FTP-based remote file system browser.

IBM RSMT based on STAF, the IBM RSE people are contacting them to find out what they are up to, might result in Eclipse front-end to STAF.

Discussions regarding TM Design

Martin O: Some notes regarding the "Design Proposal". Pretty basic for now, wanted to cover only a few important decisions:

- Keep static and dynamic information about target connections separate. Some applications might have more static data than dynamic (e.g. TI target board descriptions which are given to the debugger only); others might have more dynamic data than static (e.g. Linux connection only has the IP address but shows remote file system and process list).
- Different services may have different model refresh policies. It might be hard to understand why parts of the Remote Connections Tree are updated but others are now. Thus allow services to display their contents into a separate view if they want [Peter L: the right strategy regarding update of a particular service is to be made by the service, not the framework].
- Abstractions and Extension Point Structure – the document shows 3 possible solutions, the right decision is subject to discussion [Brian E: Additional "Interface" abstraction makes the system more flexible but makes it harder to write a nice GUI and workflow].

Should Security be designed into the TM Framework?

Greg W: In Parallel View, some security is needed; should be sufficient to have it in the services, not the framework. They have possibly a single secure connection channel or password for multiple remote systems. Is security needed in embedded?

Dave D: In RSE, were able to put Security Information on a per-connection basis. Login info is cached such that it can be re-used (on a connection basis).

Martin O: In embedded space, secure tunneling to deployed devices is interesting. Thought about solution outside Eclipse by ssh port forwarding; in TM design, need to keep in mind that connections to remote devices might be actually proxies routed through the secure channel.

Dave D, Greg W: Want to configure security from inside Eclipse; CVS already has some provisioning for ssh; maybe even support port forwarding. Martin O: the ssh support in the Eclipse Team plugin is "internal" thus not easily usable from outside.

Dave D: Knows the people who did the original CVS, could find out where they'd want to go. CVS team once wanted to make the ssh more open; were looking at using it; but was withdrawn then, might be reconsidered.

Greg W: Team support has incorporated an Open Source ssh implementation; reason for not making it public might be because CVS is very tightly integrated; looked at separating out some interfaces that might be useful; might go into ECF? – Eclipse Team support won't want dependencies into external projects, if ssh is broken out could it be part of the Core platform?

Other Comments regarding the Design Proposal

Ewa N: Both remote and local host connections are shown in the "Remote Connections" view → should we just call it "Connections View"? – Other call participants (RSE) also add the local host to the "Remote Connections" but nobody objected so far.

Dave D: On track with RSE Open Sourcing. Greg W: RSE Mentioned to IBM / TJ Watson (Evac Sakar) – they but found it very useful and recommended Open Sourcing it.

What is the Time Frame for the DSDP-TM Project? – Martin O: Still in Explore phase, no committed plan and milestones yet. From Wind River perspective, want to have something usable in WR product by spring 2006.

Robert O'B: What about the DSDP Website? – Martin O: Some legal stuff still to be sorted out, but in progress. But Eclipse board has officially approved the project.

Resources:

MontaVista will eventually have ½ person
PalmSource – trying to figure out what makes sense

Next Steps:

Dave D / Greg W to contact the original implementers of CVS team support, to find out what they are planning with their ssh code. Can interfaces to ssh be opened? Can it be migrated into the Core Platform, or into the ECF?

Martin O: want to have the next meeting already in 3 weeks time – better to meet short but often to keep in touch. By the next meeting, we might have a decision from IBM regarding RSE.

Next Meeting:

Monday, 8-Aug-2005 at 9am PST.