

Telecom and Grids Session at Supercomputing 2004 on Nov. 9, 2004 Sponsored by Global Grid Forum

Notes by Bob Cohen

Service Providers

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Attending at recommendation of Albert Geiger.

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No responses from AT&T, Verizon, Bell South or other US carriers. MCI cannot attend.

Equipment Vendors

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GGF

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Other Networks

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Discussion

Ward -BT

What would like to get from session?

Want to focus on the network. Can't provide network free. Not viable business model.

Telcos have been fiercely protective of network and won't let anyone interfere. So providing ability to change network is not possible.

In Brussels, tried to understand where telcos are going in grids.

He asked who would be interested in joining core group. But only one or two emails.

How will interconnect isolated grids across networks?

In vision BT has, how virtualize network so that when job is called for, the network goes and allocates.

Problem for GGF is that only Euros go to meetings in EU, only US firms go to meetings in the US.

If provide global WW services, need network for entire world.

Mark – GGF

Van McAtee formerly Level 3 – L3 is asking same question. How to federate VPN. Who else is thinking about this? GGF can offer a forum to think about this and prioritize. Get structure and momentum behind the effort.

1. Mark L wants to get telco industry to help make grid a reality.
 2. Big opportunity for economic return for telcos.
 3. But telcos burned over past few years.
 4. How can GGF provide a forum and kickstart activity since long-term it is valuable?
- Create a structure that can formalize group and create leaders with short-term deliverables and strategies for moving ahead. He's intensely interested in this and wants to get representation in GGF. Also I want to focus on the financial industry but it may be too early. He's very supportive of how to get this to work via GGF.

Cees DL- Network WG is already working on this.

Frank – but model is a network providing connectivity. Need telcos to provide grid services. Not about providing pipes.

John – Telcos don't necessarily want to create standards in GGF.

ML – Don't care where standards work takes place, but want to see world take place.

Franco – policy aspects are outside

John – technological and commercial aspects, but need to insure that the standards works re BM. Commercial aspects and technological aspects need to come together.

ML- Need a bus thing. Need Research Group for commercial aspects

CDL- There are differences between telcos. BT is different from other telcos such as one in Holland. Need to integrate with grid, but he took back that telcos are not interested in giving up control. DWDM backbone and Dutch telcos in research project. He asked how it fits in model or doesn't fit.

Frank – Cees Neggers has discussed this with BT. But model is closed out. Don't want network to buy services.

Aiken – what you are looking at is grid of grids. Key point is to find peering points and interfaces. Everyone looks at things differently. Need to define at layers the peering points in the same way as when we built the Internet. We need to understand regulatory and technology issues. Need to talk about these together to create peering. This let researchers and commercial interests together.

ML- question is in moving forward in GGF, how propose ==

Aiken – one group with people working together.

ML- bus and policy issues, technological layering etc. If put these people together in a room, they drive each other nuts. We need a structure with one or two groups apart from each other and then linked them together.

ML – need telco industry area director to talk technology and policy issues and try to do some experimentation. We want to succeed and make progress. What is right operating model for both types of issues? How bring together best.

Frank – I see two business models. 1. Data center centric strategy. 2. Vertical oriented strategy – grid services sold using grid engines within network. Service provider 2.0. These drive down and create two different technology bodies since have two different goals.

Aiken – We need a small group that can solve the problem.

ML- put a few models up and doesn't work, move to how to get it work.

Frank – There are 2 BT visions. But there may be lots of others. IBM virtualizes network and has relation w/telcos as it can provide services to customers who want to virtualize a network.

Franco – How get one community talking to another – Use cases can develop a way to specify requirements and then feed into technology group. Black box use case use general (bank, Service provider) specify types of visibility and technology group comes up with results.

John – GGF doesn't have demand from GGF going into commercial telcos.

Chris – model is providing additional pipes when needed

John – telcos are cautious about the future, but starting to think about this. Keeping position quite close to chest.

Franco – But if we create a use case, we can idealize the ...

John – has different groups – dark fiber group, regional network, who will decide how to join them up together?

Chris – There are lots of issues need to be tackled. Big departure from telco model.

John - No telco will ever give control to another firm. May give control to part of network. We need to get telcos and pseudo telcos to talk about their role in grid world. This is the first challenge. Need to agree an internal position. How get to that. This is the biggest challenge. Next biggest is control of network. If telcos won't give control, this is dead.

RC- we need to develop a paper on how to move to grids and then do a workshop on it.

ML- Federated VPN is good test case, and L3 thinks this is also good. Why not use that as a key?

Chris – trust and identify issues are really huge.

ML- A couple of use cases with commercial implications that bring in dollars that show that grid might be a better way. Maybe this would be the route.

John – This could be the route since

Franco –OIF Forum – they are opposed to dark fiber giveaways. They appreciate the need to target grids. Layer 1 VPN is ITU standards. This is a notion that maps nicely to that of GGF. Carrier of carriers and once have this can do lots of stuff. There are ways to express services midway. This group represents carriers and asked for formal liaison. They realize Fort 500 resources moving to this area.

CDL – What are the next action points?

ML- Connect L3 guys with CDL, Franco, RC. Figure out a few use cases that people recognize as a money maker. This moves to a set of principles.

Franco – want to see user needs, and help carrier audience create solutions.

ML- from structural perspective, someone needs to lead an effort and provide a WG or RG orientation. We need charter and area to run things. Need telcos in a group.

Ward – before we get there, we need to put a story together to say here is what happening in GGF and why a company should think about them.

CDL – What type of meeting?

Ward – Create champions in US, Europe, Asia. Need to show how grids will impact on telcos. Brussels showed that some want to be a telco.

Do mythical paper, need to find right people to plant seed in all telcos and pseudo telcos, they need to start thinking internally.

Crumb – Need to develop a higher level abstraction. To help others think.

Ward – many telcos in comfort zone and don't want to play.

Falcon – We need to be able to tell customers that we can offer a grid service internationally.

ML – It could be that if GGF made effort. May not be right time. Telcos interested in this need to do this. Need leadership from telcos.

Bertz, Sprint – Of 90 hits Sprint examined that deployed grids, there were no requests for infiniband, OC-192. He's never seen a 192 purchased. OC-12 doesn't show up as important. For a contract for an OC-48, his group would start paying attention. But there is a big disconnect, a huge gap.

Ward – There are two very distinct customer classes. One plays with big pipes. Another is very slow. Will grid become Internet 2? ADSL is moving to the top. If this is just the universities, the telcos won't play. If not

Bertz, Sprint – I see lots of mistakes with grid. Using multicast and other things that damage VPNs. How can we educate the customer and offer to educate the customer? If we look at larger BW Service, grid is in the noise from a network perspective and from a services perspective. We are trying to convince Sprint that they can use grids to back up computers.

ML- If bandwidth commoditizes, we are done, but there is no business model.

Ward – Going to intergrids, we need to interface with other Networks. Everyone will need a GGF role. If we look at where grids are today, when does this become a commercial imperative?

Ward – there are still lots of challenges to take this beyond next phase.
John could work with Franco and marry it up with where network providers want to be.

Franco – university based people are writing specs for special system. This is unfolding. Can say there are standards that need to be addressed, how make sense of these with own requirements. Can develop flip side of R&E approach.

Ward – Telcos get together on own and keep advantages to selves. By time rest of world wakes, could get most of them to develop a commercial effort. Will telcos create their own rules?

Action effort: To get telcos interested would need to find out there requirements. MS thinks it needs to be filled. No pull yet on telcos, so need to have group going to

Bertz, Sprint- demand is there but not sure.

Ward – security aspects are key. If cross boundaries not secure... Issue is to establish champion to drive this and may need three, one each in EU, US Asia. BT can't put this together on its own.

There are a number of players in EU. The barrier is the open standards idea. Telcos have done this in their own standards bodies. When goes to wider community, situation is unclear.

ML- in mgmt area and Web Services with WSRF, this was from GGF and we have broad adoption in industry. With standards completed in Oasis. Co-chair is GGF, but completed in Oasis. Franco could bring telco things. If we defined the network and policy issues....

Franco – Who is the audience? Akamai, Grand Central, who?

Ward – If virtualize network, won't work if there is no coordinator. Not clear how this would help. Telcos and others could provide VPNs and are more likely to provide Service.

Franco – if started with Use Case would have something to focus on. Need to find right people in these orgs.

Bertz, Sprint – have huge issue – now serve 100k users per CPU. Get more partner agreements and adding users. See huge issue on wireless side and landline where grids would be extremely useful. Ninety-two users of grids have defined market.

Question is now if we can develop architecture that we can offer to customers.

There is also a chance to ask companies who their Service provider is. This will catch attention of telcos.

Grids want the network to be like FedEx, want to blast data for 12 hours and go away for a month.

What is interesting is that GGF can query people. Customers are just getting dumb pipe.

When sold grid did they ask for any type of upgrade?

This provides an opportunity for earning more money.