Minutes of Telecom and Grids Session in Chicago, at Supercomm, June 2004

Main Points:

1. GGF has a series of Working Groups with activities related to telecom issues.
2. Grid for telcos is about a virtualization business model, according to British Telecom. The telco becomes a resource broker for the enterprise.
3. IBM/China Telecom sees a grid infrastructure as a way to offer better access to services and siloed applications.
4. There is an issue of whether the bandwidth to support the applications can really be supplied as needed.

Charlie Catlett –

GGF role and purpose. Organizational dimensions, 73 sponsors. 10 Gig wave is the base for involvement in grids. Upcoming events: Brussels with emphasis on production grids for commercial enterprise. June 2005 in Boston. March 2005 in Seoul.

Travostino – Network activities in GGF

GGF Working Groups (WGs) with primary focus on telecoms: Grid High Performance Networking RG, Data Transport RG, IPV6 WG, Network Monitoring WG, and Liaison functions into IETF and DMTF.

Participation to get grids on optical networks – how to create network as grid managed network. Bulk data transport protocols in Data Transport Research Group. Network monitoring what are the best performance marks can reasonably expect.
Groups with close links –
CIM-based Grid Schema WG looking at virtualization of nodes that the grid exposes.
Grid Resource Allocation Agreement WG – SLA for grids. Application Aggregation Architecture- client side resources and interfacing to grid.
Security as an issue, but integrated into all Working Groups.

Falcon –

British Telecom (BT) has a 1.6 billion pounds contract. Grid is about virtualization business model across the entire ICT resource profile. Not for bandwidth demand.

Grid computing is about splitting processing tasks into discrete parts. Moves customer's IT resources into virtualization world alongside VPNs. Grid plays to Layer 2, Application performance management. UK government using Grid to support government functions. High value, innovative IT economy based on grid consortia.

How evolve to the grid? Applications are related to grids inside framework. Web Services part is beginning to make people think about external services. Application Assured Infrastructure (AAI) provides benefits for CIO. Utility computing loosens application link with IT resources. IT resources now extend beyond the enterprise boundary.

This leads to world where IT resources for enterprise are virtual. The resource broker manages the resources things run on and the CIO negotiates with the resource broker. In this model, the enterprise does not need to relate to a telco, just with a resource broker. AAI needs to be evolved into part of the future Grid toolkit or Globusiness toolkit.

Who owns the resource pool? Globus toolkit downloads is now running 2500 a month. Need for telcos to get into action.

Impact of grid in market? IT service providers need a grid story to be credible, need roadmap. IBM has galvanized market. HP sold 13,000 grids, but within framework. Market hype has set customer expectations. Commoditization requires development of new propositions for business model or face massive squeeze.
Grid will grow IT sector by $10 billion pounds.

Impact of grid for BT. Grid supports Real Time service delivery of ICT needs. Web Services and grid become one standard. Grid in resource model industrializes and standardizes. Takes grid computing up a level by enabling virtualized resources and outsourcing.

Entering grid market. Two options exist. A player must have existing credibility in the IT space or a proven business model to enter. From a telco view, if you exploit a relevant business model, and focus on what are good at, strength in the VPN side will let you extend virtualization beyond the commercial market into the grid.
Connect islands of IT users – use VPN to virtualize the IT resources – then provide customer with own grid infrastructure within framework and own grid management software. Next step, BT offers outsourced grid management service so takes outside the enterprise. Others could also provide this. But BT permits interconnection within own options
Added assured business function – if have grid function and have true resource virtualization, can move up a layer and assure business function that the system will work, rather than saying have Application area that "never breaks."

BT sees grid as a global business model. Reduces complexity for customers.

Chen- IBM China. Grids and China Telecom Industry. Toward Grid enabled telecom services environment This covers the link with China Telecom.

China has 6 telecom carriers. China Telecom is fixed line operator. China Netcom and Mobile are mobile operators. Data services are booming. Some China Telecom entities want to do an IPO, so they have put an emphasis on the management of the network.

Outlook for access to the incumbent network – China ministry has started work on this. Availability of value-added services. Transition to 3G world is complex due to different standards.

Vision – telecom operators acquire technology to support customer centric support and increase business and IT value. How to reduce time to introduce new services? Are grids the way to get to these new services? In future with backbone network converging to IT network over united service network. If network function access is based on grid infrastructure, the network resource can be shared.

In China Telco, has siloed functions for ERP, billing, CRM. Can't share resources. Need to integrate through things like NGOSS. Fulfillment, assurance and billing can be integrated. Services are converging. Middle layer enterprise service business can connect service providers and service consumers. Map to policy management in lower layer for NGOSS. Grid can support resource virtualization.

So get to grid-enabled resource virtualization (Parlay/OMA are working on this. Policy based management can be used to enable autonomous computing. Challenges are how to enable grid within telecom.)

China Telecom CDN Case – ChinaTelecom Data is broadband network. Problems exist in low quality of service. National Video Project to provide VOD. TsingHua tried to use OGSA to build solution to enable grid Video on Demand. Content provider and directory services, billing and resource management are built into this. First go to director, then to billing and resource management does resource application approval.

Is there a virtual operator business model with the telecom being resource manager?

Questions part of the session:

Schlicting, AT&T – how does hosting fit in? Marketing this as extended benefits of VPNs, not discussing as hosting. This is a conscious choice. Issue for market entry was how to talk to enterprise customers about virtualizing IT networks; can't take same Application approach as IBM since no history in hosting. So need to get to the resource side first and then shift to outsourcing.

Hankin – customers complain about congestion and slow times for applications to be accessed. This should lead to other solutions besides providing bandwidth. Which pieces provide to customers?
Response – looking to offer virtualized network connectivity – connect together to get the latency that want. How can we approve, or say if we create a virtualization layer for connection as and when required?
Hankin – This sounds like we haven't come face to face with problems of providing bandwidth – without Application awareness, unclear can solve problem.
Response – there is a solution, but he can't explain what it is.

Will Real Time deep packet inspection take place within network?
Reply: Yes they will. In finance there is discomfort with this. If set up sniffer can't really see performance.

Don't always need to worry about performance. Can move the data and everything becomes mobile. This similar to what did at Phoenix, moved Application and data to the US. On AAI slide, what discovered was enterprises don't know what got. First offer a discovery of what enterprises have. Then, AII does assessment. Grid system can do in different way by virtualizing it and provide whenever you want. First,

Qwest – will allow infrastructure to be used for other clients? What will ROI be?
Reply: Network will be shared. Start with the spine that is providing the service – how click records together and to right person. Divided into 5 areas for memory around country. Theory is that people in one area could access your medical history, "records on tap." Government will want to use spine for all government services. Once the grid is in place, it will allow sharing but one issue is how IT resources can be shared from one to another.

Travostino – Accountability; how stay in control? How manage?
Reply: government said needs something like the spine. It is a service that could be purchased from anyone. BT won bid, but it is a service-oriented architecture where customer doesn't need to worry about bits, but just about getting health records available.

Qwest – Care is really about with new Applications, need to get over initial first costs. Need to use a foundation custom but need to move to non-government customers. Government could build own grid within framework.

Haley – Standards points made by both speakers. What will happen with ITOM model in China and UK and how will this promote deploy? Will there be other standards to promote management of complexity to support girds?
Reply: IBM China – telcos very familiar with ITOM model. ITOM will be guideline for OSS. In China, many integration projects underway. Need to do this to find value in existing data. Grid may be easier to adopt as higher value added service.
Frank – BT looking for standard to be resolved and for BT staff to get going in various bodies. Have same problem with legacy systems, especially on spine. Will need an integration layer and then work it into the specification areas.

Travostino – should GGF get involved in standards?
Reply: need to work on API. Frank – real issue is to have open APIs.

Haley Discussion

Falcon – Issue is taking a customer and see how to move on grid. Media companies can drive but need government to drive in

Sprint – we can make things more complex. When Sprint looks at data and how to change outway to do data differently, need to respond to services for Time Warner Cable and also need internal activity to make sure data is ready. Need to insure bringing down Total Cost of Ownership. How take FCAPS and change things internally.

Ward – on interconnect space, the engaged signal is not acceptable in grid system. Are prepared to share in interconnect environment and someone can take resources on overflow model.

Sprint – there are some small companies that are trying to change this.

Haley – Who takes over from resource broker? Not a big technical problem, OGA architecture would allow overflow. Anyone could be a resource broker to a resource broker. How specific might certain grids be? Specific grids could be attuned to a single area. Strongest forest will have a variety of providers.

Schlicting – He thinks vertical partnering is more important. Utility computing and partnering with software ISVs and equip providers is key. He doesn't like term grid since overused. To him, grid is distributed computing. Need to see different ways that distributed computing is used.

Franco – not a mass demand for grids. If there is no killer Application, then won't see grid dialtone.

Ward – grid dial tone may never exist. If only have dialtone and provider has no idea of what you want, then won't move.

Rick – for grid, would get managed dialtone, a more complex series of things, computing power, connection, management
McGlochlin-Glimmerglass – what about make vs buy? Phone companies aggregate bandwidth for little people, but it is not true if you want to operate your own PBX. Why did Schwab go to non-public grid?

Haley – Schwab, Royal Dutch Shell, don't run network. He sees model running to services delivery model.

Glimmerglass – resources could be owned by different sources.

Schlicting, AT&T – on

Falcon – resource pool is one of current customers. Assets become part of pool of resources and of network. Mk vs build depends on whether firms can obtain benefits without big internal spend. IBM's model of using resources of enterprise sold grid to in order to support smaller enterprises.

Haley – Deep computing grid with fee for service, companies get out of owning network. Focus is on simplification, not core. IBM got $10 billion contract with Abarti (?) to manage the network.

Peter – Does IBM see going to Application distribution and management? ERP, Peoplesoft?

Haley – Yes, all the things.

Peter – Has IBM managed communications between offices on an IPO day? These companies shut down this activity on a heavy trading day.

Haley – can't say

Franco—are customers feeling locked in to Deep Computing?

Haley, - no.

Franco – can customer on IBM grid transport it to another environment?

Healy – yes. Likely.

Sprint seeing three ways 1. Content provider. 2 market opportunity as trusted advisor and outsource business
3. Managed network management. Will see more partnerships to go to market with grids.

Haley – could also see telco as sell through.

Sprint – one key ability may be how quickly can get info out.

Alcatel – how much associated with transport vs content? Application providers and network providers need collaboration to work.

Haley – attacking business process modification, since this reducing the 30% of costs for software linked

Glimmerglass – can IT companies move into this space?

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