GISB Future Technology Task Force

Conference Call
August 19, 1998
Draft Minutes

Call to Order: Richard Hamilton called the meeting to order at 9:30 AM

Welcome: Richard Hamilton explained that the meeting topic was Internet redundancy.

Secretary: Steve Hinton volunteered to take minutes.

Antitrust: Susan Croley read the GISB antitrust guidelines and asked if the group had questions; there were none.

Meeting Discussion:

Richard stated the meeting purpose was to respond to 'Item 10' in the work paper - Request from the Executive Committee' [which deal with 'redundancy recommendations for Internet connections which allow the TSP to choose the options that are most cost effective for meeting its customer's requirements']. He then inquired if everyone had reviewed the discussion material posted on the FTTF home page and asked if there were additional possibilities to consider; no other possibilities were suggested. The posted list included the following possibilities:

1. Isolated alternate ISP connections at a single site; twin providers or single provider with separate lines into a site.

2. ISP preferential routing; smart ISP which can route packets along different Internet pathways to avoid router/line outages and/or bottlenecks.

3. Multiple Internet connectivity through diverse routes; dial-up or lease-lines to external off-site Internet connections at different geographical locations.

4. Private dial-up TCP/IP connections exclusively to conduct business with an organization (simulate ISP connection without connectivity to public Internet. (login and PW same or different for each pipeline ?)

A question was raised as to whether the group's purpose was to draft standards language or guidelines language. Several participants indicated support for guidelines to answer questions such as:

1) The meaning of multiple Internet connectivity relative to redundancy.

2) Considerations when making multiple connections.

3) Tips for shopping for 'redundant' Internet service.

4) Potential downsides to the each of the possibilities.

Inherent in the above is the basic idea of letting companies know what their options are and what the pros and cons of the alternatives might be.

A question was then raised as to the intended audience of the group's possible recommendation on guidelines for redundancy? After substantial discussion, there was consensus that the audience should include: potential customer activity page users, activity page sites and batch EDM sites. Susan C. reported that the EII had responded affirmatively to FTTF's question from the 8/10/98 meeting concerning inclusion of batch EDM sites when discussing redundancy considerations. The discussion proceeded to address each of these three cases individually.

For the client side users of Customer Activity Pages the notion of two independent Internet connections was discussed. Such connections could be dial-up or lease lines. The importance of independence with respect to geography and topography was stressed. Several participants noted that most Internet service provides say their services have redundancy and that companies should involve technically qualified staff (internal or external consultants) to evaluate vendor claims. For example two ISP vendors using the same 'back-bone' to the Public Internet would still present a possible single point of failure if the 'back-bone' where disabled for some reason.

There was considerable discussion on whether FTTF should make specific recommendations or simply state that there are methods to achieve redundancy. In addition, the secondary question of which systems to consider was addressed; i.e. should redundancy issues for servers, fire-walls, routers, etc. be reviewed. A consensus was reached that FTTF should list the options available to achieve redundancy external to the fire-wall in the broadest of terms and recommend that companies involve their technical staff early in the selection / implementation process. The following draft wording was proposed to meet the preceding need:

"End users should consider but be limited to the following possibilities to achieve redundant connectivity:
1) Multiple dial-up connections
2) Multiple lease-line connections.
3) Multiple Internet Service Providers.
4) or Combinations of the above.
5) Geographically diverse connections.
6) Topographically diverse connections; i.e., connections which result in Internet pathways that do not pass through a single point/service/router."

It was noted that items 1-5 are potential means of achieving the defining characteristic of item 6. That is, there should not be a single point where a failure would have the effect of disabling the second connectivity pathway in addition to the first.

For the Customer Activity Pages Sites, there was only limited discussion; there seemed to be general agreement that the recommendations for the client-side should apply to this case.

For EDM Sites, two possible approaches were discussed. The first is a high end (large $) approach involving two ISP and two points of connectivity, each of which was identified by the same URL making the process of redundancy transparent to the sender. The simpler and more economical alternative approach is maintain two different Internet connectivity URLs (presumably on topographical different ISPs). For this to result in communication redundancy, the sender must know of the existence of the second URL and have programming in place that will automatically switch batch-browser transmissions to the second URL when the primary URL is unavailable. There was considerable discussion of second approach given it's apparent simplicity and the fact that several companies have implemented the concept. Concern was expressed that companies should not be forced to make coding changes that would not (or seldom) be used and also that existence of secondary URLs might not be publicly disclosed. Possible draft wording for an FTTF guideline was proposed as follows: "Receivers may maintain multiple URLs and if such exist, the sender must attempt to use these during primary URL outages".

Richard Hamilton indicated that coding batch-browsers to switch between a primary and secondary URLs could be put to good advantage even when a receiving site has only one point of connectivity by listing the IP address as the secondary URL. Doing so helps overcome problems with missing DNS entries and with some routing issues on the public Internet. The Williams family pipelines, El Paso and TransCapacity have already implemented portions of this approach; other participants agreed to look into the cost and feasibility of implementing the idea.

Adjournment: ?? made a motion to adjourn; ??? seconded it. The meeting adjourned at approximately 11:00 am CT.

Attendees:

Susan Croley	Duke Energy - Trunkline Gas
Bill Fortney	El Paso
Steve Hinton	TransCapacity
Joe Kardus	National Fuel Gas Supply
Ron Payne	SONAT
Mike Shahan	CNG Transmission
Andy Sicignano	Enron Capital and Trade Resources
John Smith	CNG Transmission
Leigh Spangler	Latitude Technologies
Mike Stender	El Paso
Stan Thomas	KN Energy
John Tsucalas	EDS
Pete Whatley	Dynegy