The Story Behind the iProvo Portals

Posted by Jesse, Free UTOPIA, Monday, September 22, 2008

A lot has been made of the issues with phone service on iProvo and the blame laid at the feet of World Wide Packets (now owned by Ciena). After getting a technical overview of what's going on with the devices, it appears that the blame is well-placed. As promised, earlier, here's the explanation as to why the WWP portals are a big bucket of fail and how UTOPIA managed to dodge most of those issues.

The central problem is that the portals used in iProvo were built around MGCP, a protocol that competed with (and lost to) SIP. MGCP is designed so that the switch handles all of the calling features, including things like generating dial tone. The portal, then, is a "dumb" device without a lot of processing power. Once it became clear that SIP had beaten MGCP in the marketplace, WWP issued a patch to add SIP support to the devices. This introduced many of the problems that users are now familiar with.

The primary problem is that the portals were never built with enough processing power to handle all of the client-side things that SIP is supposed to do (including, of all things, dial-tone generation). This frequently led to processing delays and software locks. Also consider that this patch is not a proper implementation of SIP, but rather an emulation stack designed to translate SIP commands into MGCP so that the portal could understand it. It goes without saying that this emulation layer adds even more processing overhead to the mix with even more problems. With all of this taken into account, it's pretty obvious why the phone issues on iProvo ended up being so bad for so many customers.

That begs the obvious question: why did iProvo stick with the WWP devices despite the obvious problems with them? It's simple: money. They bought 10,000 of the things right off the bat and instead of writing off the portals as a loss or only using them for non-phone customers, they just kept hooking them up. Nuvont and Veracity ended up deploying their own IADs and ditched using the voice features of the portal to avoid those issues. UTOPIA had detected the MGCP issues early on and forbade providers from using the built-in voice features of the portals, instead requiring them to use their own IAD. It was a smart move that kept voice working stably on UTOPIA.

Because the problems with the WWP portals are caused in large part by the hardware, no software patch can right them. The portals will have to be replaced or, as a much cheaper solution, an IAD will need to be given to each phone user instead of using the voice features of the portal. In either event, it serves as a warning to not bet too heavily on a single technology. Whatever bulk discount iProvo got on the WWP devices was almost certainly eaten up in customer churn.

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