

Title: RAD Announces New Pseudowire TDM Gateway: Offers Multi-tenant and Carriers' carriers backhaul applications

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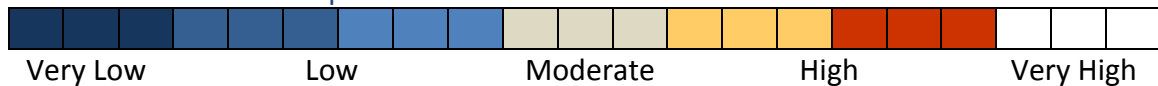
Date: June 11, 2008

What RAD is Doing:

Yesterday, RAD announced the IPmux-216 TDM pseudowire access gateway. The selling point for this platform is a new ASIC that RAD indicates will support clocking for each of as many as 16 E1/T1 circuits – giving those operators serving mobile backhaul requirements the opportunity to support the synchronization needs of multiple customers at the same cell site or MTU, supporting OAM tools including in-band loopbacks and fault propagation.

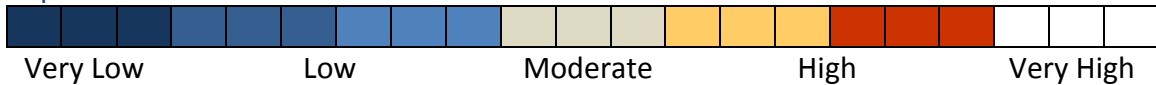
Ratings:

Relevance to Market Requirements



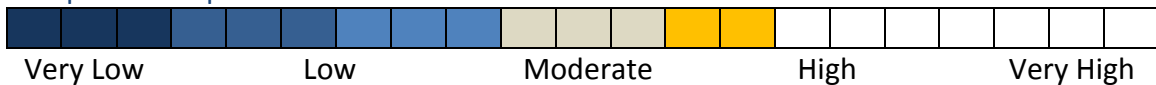
RAD is responding to the fact that the installed base of E1s/T1s for voice on 2G/3G radios is not necessarily disappearing and being replaced rapidly with Ethernet interfaces as some radio manufacturers would have you believe is already happening, and alternative providers would like very much to cannibalize incumbent operators' huge installed base of E1/T1 into MTUs for PBX and Internet access.

Importance to RAD



RAD needs to give mobile operators incentive to buy pseudowire aggregation gateways prior to vendors getting the form factor, cost, and availability of both 3G and 2G transport interfaces on their radio equipment to a more competitive level in 2009. They also need to increase their relevance to important alternative operators like MSOs that have increasing opportunity for carrier's carrier cellular backhaul and as alternative access providers in the Enterprise market.

Competitive Impact



RAD is claiming competitive advantages in synchronization that its PWE3 gateway rivals will potentially have to respond to, and therefore potentially has the opportunity to increase the marketability of this type of platform compared to T1/E1 leased lines if it succeeds in generating proof points and satisfies carriers that it has indeed enhanced synchronization accuracy over the PSN due to faster packet processing and potentially the ability to use smaller frames. But proof points on that will have to be established – and simply leaving in a T1 from which synchronization can be taken remains a viable alternative that is not that difficult where a particular end customer such as a mobile operator has two or more already installed.

Analysis

RAD is addressing one of the key issues that have affected the pace with which operators have migrated legacy T1/E1 traffic to packet networks – synchronization. If it can convince operators that it has a superior solution, it can sell into alternative operators addressing MTU T1/E1 access requirements used for voice, for instance – which is still a truly huge installed base for incumbents. This also gives RAD opportunity in mobile operators to try and gain a bit deeper market penetration with pseudowire cell site gateways before widespread availability of Ethernet interfaces at attractive price points, a form factor that integrates into the radio infrastructure rack, and availability and proof points have been established for these interfaces at both 3G and 2G.

We think that RAD's blanket statement that this will cost justify fiber build outs was a bit too aggressive, even for a NxtComm press release. But latency issues with this class of platform have been a potential issue for operators worrying about services requiring the most exacting synchronization. If RAD has materially and substantively addressed that, it will increase its market opportunity. Proof points are required before the full market impact will be known, but RAD is definitely on track in terms of responding to the right operator issues. The voice services that constitute a lot of MTU T1/E1 traffic and are still a significant component of mobile traffic require exacting synchronization, so this is a viable form of potential differentiation for RAD to pursue.

The biggest problem that mobile operators have to solve is scaling their mobile data backhaul, not replacing E1s/T1s dedicated to voice. Not touching those in the many instances where only 1 or 2 are installed is a potentially viable and safe option. But giving them a means for legacy support leveraging the economics of the PSN can be a big advantage. This might enhance a business case for fiber build out to dense clusters of MTUs, but it is doubtful it will do so with great frequency for cell sites outside of urban areas in large markets in Japan, China, and Asia Pac, or Northern Europe where fiber is on average more available than it is elsewhere.