

Berlind's Testbed

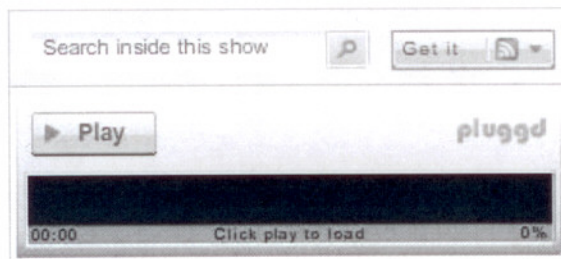
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Should you be “rock’n out” instead of “Skype’n out” because of supernodes?

Posted by David Berlind @ 6:23 am

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Tags:



The folks from Raketu have been unrelenting in trying to get me to cover what they believe to be breakthroughs in both feature-set and underlying architecture for a universal "communications client." Given what Raketu's free download does, it's hard to say exactly who it competes against. It speaks every

IM protocol out there so on the surface, it looks a bit like Trillian (what I currently use to multiplex AIM and Yahoo IM). On the other hand, it does voice-over-IP like Skype does and offers bridging to the regular telephone network at an astonishingly low or no cost. Skype seems to be the company's main target as it spends a lot of its time trash-talking Skype's "supernode" based architecture.



NO SUPERNODES - RaketuScience

Raketu does not use your computer for other users communications
Patent pending technology

In my podcast interview of Raketu's founder and CEO Greg Parker, you'll hear a lot about how he thinks Skype's architecture means that Skype users can unwittingly have their computers deputized into being relay stations for other Skype users — hogging precious processor and memory resources and raising potential security concerns. As you can hear from my line of questioning in the interview, I'm not completely convinced. Although, if is true, you'd think that Skype would offer end-users some way to opt-out of being such a relay station? How about it Skype? Care to respond?

Using the Flash-based player above, you can stream the podcast directly to your desktop, download it, or if you're already subscribed to ZDNet's IT Matters series of podcasts, it should appear automatically on your desktop/notebook or portable audio playback device (depending on how you have your podcatcher configured). For more information on how to tune into ZDNet's podcasts, check our How-To.

Here's a taste of the Q&A:

ZDNet: Why don't you tell ZDNet's audience what Raketu is.

Parker: The foundation and vision behind Raketu is to really bring together communications, information, and entertainment services all into one product. A one application and one service offering to our customers. So it's very much a lot of different things all put together into one. For example in the communications side of the world, Raketu is voice and voicemail, conference calls, any instant messenger, SMS texting, conference text, file transfers, email, and social networking. On the information side, we have features such as news, sports, and weather feeds, stock quotes with alerts, and integrated search and travel features. On the entertainment side, we have a multimedia player built in for audio and video that has karaoke...we have a picture viewer built in so you can view your pictures and slides, and we have a podcast reader/manager built in too.

ZDNet: The pitch that your public relations people were making to me...they were citing one special unique feature that separates you from...I guess what we'd call the 800 pound gorilla out there; Skype.....Skype uses something called 'supernodes' and according to your public relations folks, there are no 'supernodes' (found in Raketu)...what's the big difference here? Why does that matter?

Parker: Sure, well supernodes or not the use of supenodes is important for a couple of reasons. One, basically anybody who logs into the environment of Skype and agrees to the license agreement actually has the ability to become a supernode. And all a supernode is is, when you log in, you can begin to relay other people's communications. So in fact, when you're not actually using Skype, you're not communicating through it, other people's communications can be relayed through your computer. Ultimately what that means is that your computer, your memory and your CPU and your bandwidth, are all being utilized for other people's communications...not your own. So, we don't do that in Raketu, we have what we call a next generation, peer to peer architecture and we don't use any supernodes. And there is obviously the potential for having security issues with having supernodes that we also don't have, because in the supernodes environment, you open up your computer, obviously to these other connections and other computers that are really not authorized to have access to your computer, so there is some potential security issues. In addition, because we don't use supernodes in the relaying of our communications, we are strictly peer to peer in our environment, we have less jumps and less relays, so what it means is that the voice quality is higher and our call completion rates for example, are higher than they are in the Skype environment using supernodes.

ZDNet: So Skype was considered pretty revolutionary when it first hit the scene, and has certainly enjoyed quite a bit of traction in the marketplace. Now it's a part of Ebay, so there was a very lucrative transaction that took place for the founders of Skype...How is it that you're able to accomplish what Skype's able to accomplish without this sort of architecture? Why is it that they are going with that architecture and you are going with the one you've gone with?

Parker: Well I think we have to go back to the roots where the Skype architecture came from...and understand where peer to peer development was at that point in time in all fairness. We, developing Raketu or the thoughts of Raketu were developed post that time...What we did there was, we made a movement towards what we call more peer to peer pure play. You know in the case of Skype...I don't actually know where Kazaa, if we look back in history, actually came up with the idea of using supernodes. But, even if we go back further in history with peer to peers, I mean look at the projects like the SETI project for example, where people downloaded screen-savers onto their computers and when their computers went into dormant mode, the screen-savers, they could be utilized in a peering type of environment for calculations. And that sort of kick started a lot of discussions and theoretical discussions as well as implementations on how to do peer to peer. Certainly Kazaa's model of peer to peer using supernodes was an interesting one...and in certain cases, I think very valid to do that. Moving on, from the Kazaa to the Skype days, it certainly seems historically that's where that architecture came from. If you think about it, that architecture was really designed around a file sharing environment. So, not a real time communications-style environment, but more of a file sharing style environment, and it works very well for that type of environment, so don't get me wrong, it does. At Raketu, we sort of stood back and without even really looking at Kazaa's architecture at the time, or Skype's for that matter, that, we wanted to build out a far more robust peer to peer environment that wouldn't really take the next step forward towards a peer to peer environment. So less reliance on any servers or relay nodes as much as possible.

David Berlind has been Executive Editor at ZDNet since 1998 and has been a technology journalist since 1991. Although he can't respond to all e-mails, he reads them all. You can reach David at david.berlind AT cnet.com. If you don't want the content of your e-mail to turn up in a blog entry, make sure you say so. To the extent that most e-mail he receives looks to sway his opinion about something, he usually looks to pass those points of view onto ZDNet's audience members for their consideration. For disclosures on David's industry affiliations, [click here](#).