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## A Look Inside Killer Applications of Metro-Scale Wireless Networks

By Lee Tsao

During the recent W2i Digital Cities Summit held in Philadelphia PA, I was very privileged to lead a group session focused on "New Services and Metro-Scale Network Deployments." The participants of this group included representatives from service providers, academia, non-profit groups, government, and technology providers. The group's views were as diverse as their backgrounds. All of this produced unique perspectives and voting results. In the final tally, the application services that hold the most promise in metro-scale broadband wireless network deployments are: Voice over IP (VoIP) applications, and location-based/presence aware applications.

### Voice over IP

VoIP as a killer application – tell me something I don't know. Considering that VoIP technology has been commercially available for the more than 10 years, did it really take all of us 10 years to realize something that is so obvious today?

Now consider the host of the Digital Summit (City of Philadelphia, Pennsylvania) has upwards of 18,000 2-way radios, cell phones, and other communications devices in service today. Think about the potential cost efficiencies included only with on-network communication cost reductions. Even a small reduction compounded by 18,000 devices could yield millions of dollars in hard savings over several years. That would cause any telecom executive to take pause, but let's leave that discussion for another time and another column.

### Location Based and Presence Aware Applications

This class of applications reaches beyond today's generic business and personal user interface, incorporating the knowledge of the user location to other attributes of the user profile. This information is then used to tailor the enhanced "User Experience" presented back to the user. The resulting user experience could help the user find someone in the same area with similar interests, find a place interesting to visit, or present something the user will more likely want to consume or purchase.

Early examples of location-based/presence aware services being deployed on metro scale wireless networks can be found at <http://philadelphiacloud.com/home.php> or <http://athenscloud.com>. While you may consider the sophistication level of these "Clouds" to be in the beginning stages of development, it is a precursor of applications and services to come. The masterminds at Yahoo and Google already know this – both companies continue to invest R&D on localized search capabilities and location aware applications in anticipation of something most of us do not yet fully appreciate. Could 2005 be the 1995 of location-based services?

### Conclusion

Now the question is: what could Metro-Scale Broadband Wireless as a killer applications platform mean for you and your organization?

Studies have estimated one to two hours of additional productivity per business day when field workers have access to citywide broadband wireless access for business use.

As an initial step, conduct an informal review of your applications services portfolio, and consider the cost efficiencies that could be realized by leveraging metro-Scale wireless access for VoIP communications and location-based/presence aware services. The results may surprise you.

In upcoming columns, I will provide detailed examples of what your fellow IT executives are doing to take advantage of metro-scale broadband as a weapon, or to defend against their business competitors. I will also introduce you to the industry experts who are shaping the future of operational excellence as it relates to massive scale wireless networks.

As the executive caretaker of your company's IT infrastructure and strategy, what other metro-scale wireless networks applications and services can you envision today? Share your ideas with us establish yourself as a true visionary amongst your peers. Send me your email address, and I will send you the full interim results of applications that we identified as part of the focus group discussions at Digital Cities.

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