

Leveraging WiMAX Technology for Real-Time Medical Information Exchange and Emergency Awareness

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1. How can new technologies and approaches improve outcomes, reduce costs and/or improve response times for an emergency?

WiMAX technology can make emergency services better off in saving response time and transmitting more useful information. For instance, the current emergency services in hospital systems certainly cannot be satisfied with mobile radio voice channels any more. Instead of making phone calls, doctors in the ambulance can contact the hospital emergency centers in a more efficient and effective way. Setting up video connections with good capability and image quality between fast moving ambulances and the emergency service center in the hospital is the key. Information and health situation of the patient can be analyzed in a much more efficient and precious way by doctors waiting in the hospital. In addition to video connections, more technical details concerning the patient's real-time physical situation can be transmitted as well, such as electrocardiograms, etc. By gathering all those useful information, doctors can know the condition of the patient very well before the ambulance arrives, thus can prepare the operation room and surgery plans in advance. In the process of hospital ambulance services, even one second saved could be a life saver for patients. Furthermore, location based services can also be added to this scenario, which would help the hospital center get information about the real-time locations of its emergency vehicles.

2. If you were offered 10-15 minutes to give a short talk, what would it be?

I would talk about the current emergency services system in hospitals and analyze what is missing in the current system. Technical details about how to implement my ideas would also be included, as well as challenges of the new system. A basic SWOT analysis would be outlined.

3. What are the most pressing business, process, organization and technical issues?

Willingness of emergency service specialists and hospitals to share information about emergency response services and shortcomings is needed. Overhead cost to deploy new technology would require significant funding.

4. What is the role of university research in this area?

The university research can help hospitals analyze the kind of information that they need in the case of ambulance services. In addition to analyzing data, university research can also help developing software applications and hardware which can be implemented in either emergency response vehicles, hospital emergency centers, or distributed triage locations.

5. Do you want to propose and help run a new breakout group?

Not at this time.

6. What is the most important action the DMI can take?

Increase the level of collaboration and information sharing between university researchers and emergency response personnel. Researchers need to understand the technologies and services that emergency personnel want and need.