Ambient Communication

Connecting Your World
Imagine for a moment, being able to seamlessly converse, collaborate and engage with coworkers from all over the globe. That’s the idea behind Ambient Communication. Building upon established technology, AT&T Labs researchers are aiming to make people working on opposite ends of the globe feel like they are together in the same office. Ambient Communication combines videoconference capabilities, speech, gesture and touch interfaces, facial recognition and machine-to-machine communications for an entirely new experience on our network.

How did the idea hatch?
Ambient Communication began in the minds of AT&T Labs researchers Gregg Vesonder and Thomas Kirk. The two, along with many others working in the Labs, were inspired by spontaneous, yet effective, discussions they had while taking breaks at work or sitting in the Labs’ common areas. They sought to create a system that reflects these casual discussions. The resulting innovation, Ambient Communication, is designed to take the hallway conversation and expand it beyond the people that were involved in that particular discussion. In essence, they designed a digital common area for people from all around the world to brainstorm, have ongoing discussions and monitor selected areas.

The Future (art of the possible)
A working prototype of this technology is currently being used in AT&T Labs, and researchers are planning for expansions in additional facilities. In the future, Ambient Communication will be able to connect users with enhanced features like:

- **Facial and Vocal Identification.** This system will automatically identify users through facial recognition and voice identification, and then adapt to accurately capture their conversations. Users will also be able to set personal visibility preferences for user access.
- **Ongoing Conversations.** Ambient Communication will facilitate conversations in multiple locations, allowing users to pick up wherever they last left off in their discussions.
- **Speech Recognition.** In addition to identifying users, Ambient Communication will recognize what they say and transcribe their discussions as they happen – making it all the easier to remember where you left off in a conversation.

About the Researchers
Gregg Vesonder, Executive Director of the Mobile and Pervasive Systems Research Department, has been leading the development of Ambient Communication. Vesonder was appointed an AT&T Fellow for his work in artificial intelligence and developed the first commercial system in telecommunications for the technology in the 1970’s.

Thomas Kirk, Principal member of the technical staff at AT&T Labs, also focuses on mobile pervasive system. He explains their work on Ambient Communication, “We’re trying to enable the kind of communication that happens spontaneously, like in hallway conversations and expanding those communications scenarios beyond the people that were involved in that particular discussion.”