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## Money

SECTION B

# FCC set to expand wireless frontier

## Ultra-wideband could help quake victims, police

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USA TODAY

Regulators are poised to approve a breakthrough wireless technology despite concerns by airlines and cell phone carriers about interference.

The versatile technology, ultra-wideband (UWB), is expected to revolutionize industries such as consumer electronics. Among other things, it could let consumers set up wireless cable TV networks at home, help rescuers find earthquake victims in rubble and greatly improve collision-avoidance systems. The Federal Communications Commission is expected to OK the technology next month, paving the way for product rollouts this year, say people familiar with the matter.

Unlike standard wireless systems, which emit radio waves on specific frequencies, UWB devices send out pulses of radio energy, up to 1 billion a second.

By precisely timing returning pulses, UWB can sense objects and measure their position far more accurately than traditional radar.

It also operates across a wide swath of frequencies, enabling it to

run at very high speeds and very low power levels. Thus, unlike narrowband radio waves, UWB signals can penetrate walls more easily.

Ultra-wideband could:

- Help cars avoid collisions by sensing the location and speed of oncoming vehicles. "This can greatly enhance accident avoidance," says DaimlerChrysler spokesman Stuart Schorr.

- Allow police to detect the movements of a hostage taker through a wall.

- Spawn wireless home networks, linking cable set-top boxes or computers. UWB goes a step beyond Bluetooth and other current home wireless systems by transmitting video and other high-bandwidth content. It also can be used to wirelessly download video from a camcorder to a TV.

- Track the precise location of retail products in stores or keep track of military equipment.

- Provide low-cost security systems that could distinguish between,

say a pet and an intruder.

However, users of Global Positioning Systems (GPS) say that by traversing many frequencies, UWB might interfere with GPS systems, such as those used by airplanes to navigate over oceans. Satellite-based GPS signals are very sensitive.

"Now is not the time to inject instability into the national air system," says James Miller of United Airlines. The Department of Defense also has expressed concerns.

But FCC officials say UWB emits about as much energy as a laptop PC, and interference is unlikely.

Jeff Ross of Time Domain, a leading UWB provider, says opponents "are really concerned about competition." UWB could challenge GPS systems by providing more precise location information.