

The recovery has already begun

By Morry Marshall, Courtesy of Embedded Systems Programming

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A semiconductor sales recovery has begun. Yes, semiconductor sales growth in 2005 will be measured by just a low single-digit percentage, but the recovery has already begun and will last into 2008. Many are now forecasting relatively flat, single-digit growth for the next two to five years, but semiconductor sales growth will be much better than that, returning to the high teens and above before entering a cyclical slowdown in late 2008. Where will the growth come from? First, the old reliable PC and cell phone markets are not going away. They'll form a base for further growth; but new markets are also on the horizon.

An enormous amount of digital content is being generated and will increase exponentially over the next five years. Consumers are going to want to do two things with that digital content. They'll want to move it from platform to platform, and they'll want to carry it with them. These two demands will create new growth in two semiconductor end-use markets: connectivity and portability.

Connectivity, in this context, means the ability to transfer information between two or more platforms that may or may not use the same digital or analog formats. Consumers want to transfer digital content from any one platform to any one of many other platforms, including digital still cameras, MP3 players, personal computers, HDTVs, audio amplifiers, game consoles, and a host of devices yet to be introduced. This demand will create markets for media PCs, media hubs, and many other wired and wireless interfaces.

At present wireless connectivity is a tangle of competing standards: Bluetooth, Wi-Fi, Wi-Max, UWB, Zigbee, and more. Each of these standards seems to be best suited for an optimum range and data rate. Different end-use applications will migrate toward the best solution for that application. For example, cell phone headsets will use Bluetooth for the relatively short-range, low data rates required. Cable-replacement applications within one room will use UWB. Control applications will use Zigbee. There will be plenty of room for growth for all. The cell phone is already an outstanding example of portability, but cell phones will compete with PDAs, portable media players, handheld games, and other devices to become the portable consumer platform of choice for voice telephone connections and for audio, video, photo, and data storage and playback. Again, there is plenty of room for growth for all.

The semiconductor industry has been pronounced dead several times, doomed to mature, flat growth. But it's not dead. Enlarged by new markets, connectivity and portability, it's alive and well. As shown on the accompanying chart, total worldwide semiconductor sales will grow at a calculated average growth rate of nearly 20% from 2005 through 2008.

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