

The Future Is Paved with Copper

Online staff -- 12/3/2004

Electronic News

<http://www.reed-electronics.com/electronicnews/index.asp?layout=articlePrint&articleID=CA485060>

Once upon time a future looked bright if it was paved with gold, but in the CMOS wafer production business, copper currently holds the highest status, according to the latest from Semico Research.

The fact that copper is valued higher than gold is particularly evident at 130nm and smaller process technologies. Semico credits IBM for the early development of copper metallization and low-k dielectrics as an alternative to aluminum and oxide.

Short term, the industry is well aware of the new challenges faced as geometries have continually shrunk, and copper simply outperformed as a device wiring system. But the long answer version is far more complex, Semico said.

In the next few years, new 300mm fabs coming online are expected to generate the largest copper layer demand and in the 2007/2008 timeframe, a growing portion of flash and DRAM unit volume is expected to use copper creating demand for copper in memory devices.

With total copper layer demand predicted to grow nearly 170 percent over the next four years, 130nm copper growth will be mainly from expansion and upgrade of existing tool types, Semico said.

© 2005, Reed Business Information, a division of Reed Elsevier Inc. All Rights Reserved.