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## ***Plastic challenge to silicon microchip***

Plastic Logic secured \$100 million (£51.5 million) to build the world's first plant in Dresden, Germany, for making semiconductors out of plastic rather than silicon, company officials said.

The technology could cut the price for electronic circuitry by up to 90%.

Morry Marshall, vice president for strategic technologies at Semico, a Phoenix-based semiconductor research group, said plastic semiconductors have “tremendous potential” and add up to a “breakthrough that is waiting to happen.”

The initial products from the factory will be pieces of plastic about A4 size. The basic plastic substrate will be polyethylene terephthalate, a form of plastic used to make bottles.

By 2009, the Dresden plant should be producing 2.2m units of A4-size semiconductor sheets a year. They will initially be flexible “control circuitry” for large displays the size of a piece of paper that can hold large amounts of information—equivalent to thousands of books.

The distances between adjacent circuitry lines in the plastic semiconductors will be 5-10 micrometers (5-10 millionths of a meter), which is higher than the nanometer (billionths of a meter) dimensions of the latest silicon semiconductors.

Under development in Plastic Logic's research operations are plastic circuits that are just 60 nanometers in dimension, said John Mills, chief executive, holding out the possibility that before long the electronic characteristics of the company's plastic devices might not be too different from those of conventional silicon chips.