



# World Report

## SILICON VALLEY

### **CHIPS**

**WITH EVERYTHING**

Fast forward  
to the future

### **NET BENEFITS**

Doing business  
on the web

### **WIRELESS WORLD**

Broadband breaks  
down boundaries



# Microprocessors that power your mobile to do everything for you

□ The Atmel Corporation is another semiconductor manufacturer looking to wireless technology as the future. Atmel, which has just spent £1 billion on Siemens' former chip-processing plant on Tyneside, started out making memory chips for the US military.

The company then moved into non-volatile memory – chips that don't lose their data when the power supply is shut off. Now it has become the first firm to integrate memory with a microprocessor, thereby squeezing the functionality of two chips on to one.

This integrated device also contains the digital signal processors, or plugs, that process data after it has been converted from analogue to digital. It is a technology that's perfect for integration into mobile phones.

According to Atmel president George Perlegos, this diversification is a natural progression from its days as a memory-only producer to meeting the demands of the industry and the growing wireless market. But memory is still the core business.

"Most of our business is providing the memory for all these processors. If other people added this memory then we wouldn't have the business. So we had to do additional things," says Mr Perlegos.

"The wireless communication market is the fastest growing sector. In a year or two, we're going to be building two billion phones worldwide."

To capitalise on the mobile phone revolution, Atmel recently bought Motorola's Smart Card IC division. Smart Cards can store all our personal information, allowing us to pay

parking meters, buy dinner or gain access to a secure building.

As National Semiconductor's Patrick Brockett points out, having Smart Card chips in a mobile can make your phone the nerve centre of your life. Atmel is already thinking a stage ahead and looking at mobile multimedia and security.

"You'll want your phone to do everything," explains Mr Perlegos. "You'll want to see a picture on your phone someday and you'll want to look at the stock market and be able



PERLEGOS

**'Soon we're going to be building two billion phones worldwide'**

to buy something. And what everyone wants to be able to do is e-commerce, which means images.

"As we bring images to phones you'll need a camera. We have acquired a group in France, called Thomson TCS, to produce a small digital camera that can fit into cell phones," he says.

"The other thing they have is fingerprint technology, so you'll be able to scan your finger and it will recognise you and turn your cell phone on. Nobody else can open it.

"Such technology will be invaluable for businesses that are attempting to win over new users who are currently reluctant to make transactions from a mobile phone because of their concerns over security," he adds.

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Photo: Atmel