

January 22, 2013

# **Intel on Schedule for Mass Production 14nm Chips**

<http://www.tomshardware.com/news/>

Micronews


26/09/13

# La noticia

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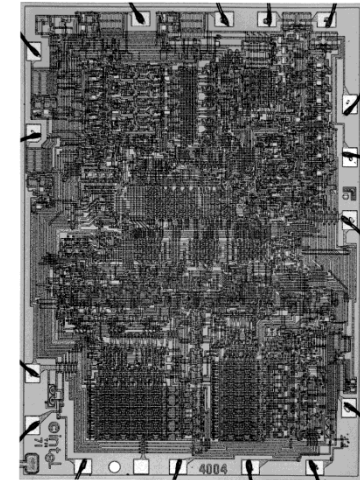
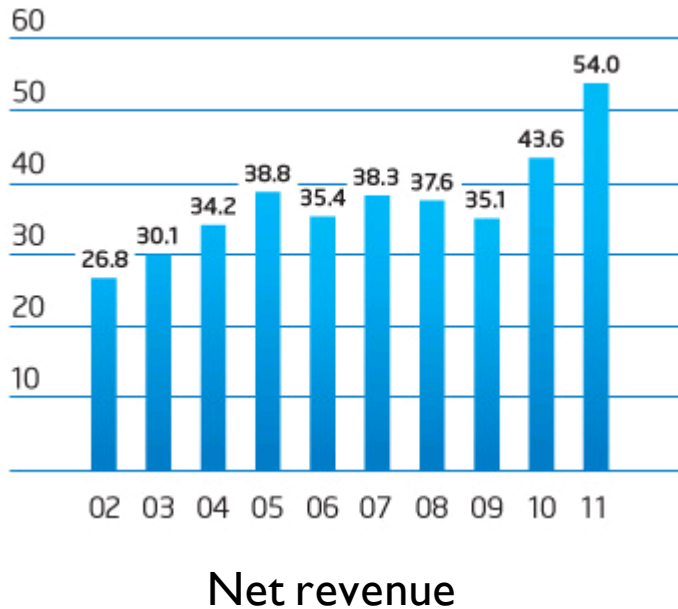
Intel will be starting the production of **14nm** chips this year. For the production of these chips Intel has appointed three factories that are already prepared for 14nm production: D1X in Oregon, Fab 42 in Arizona and Fab 24 in Ireland. Intel will begin mass production of 14nm chips in 2013 and they should become **available on the market sometime 2014**.

The current '**Ivy Bridge**' chips and the '**Haswell**' chips that we can expect in June are still based on **22nm**. The first 14nm chips that we can expect will be codenamed 'Broadwell'. The advantages of 14nm chips over 22nm chips include **low power consumption**, possibly lower TDP, and as a result they will allow for **more computing power per surface area**.



# Intel

- ▶ Líder mundial en la industria electrónica
- ▶ Fundada en 1968 para construir memorias, realizó el primer microprocesador en 1971



# Las fábricas (foundries)

## *14nm and Beyond*

**D1X  
Oregon**



**Fab 42  
Arizona**



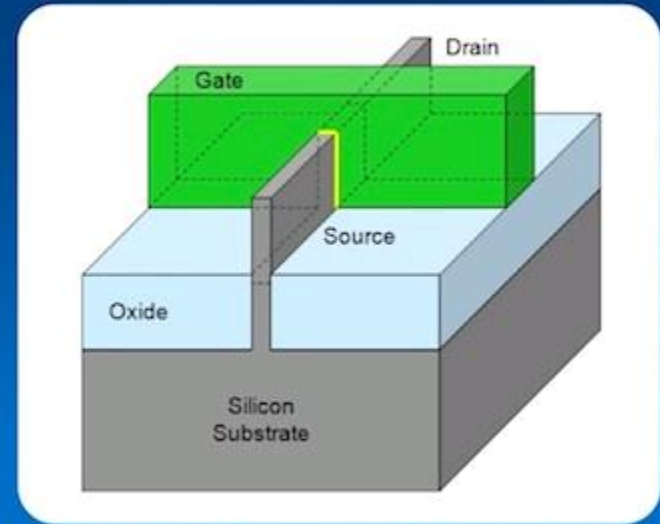
**Fab 24  
Ireland**



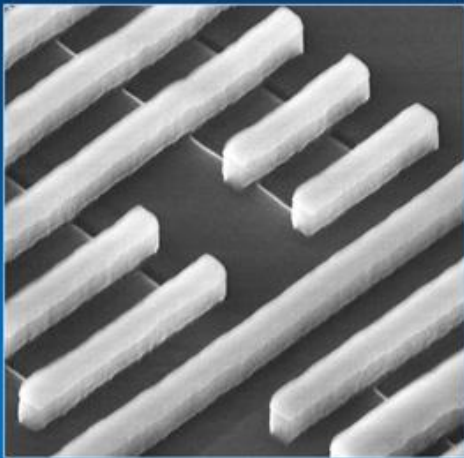
# 3D Tri-gate transistor de Intel

- ▶ 4 May 2011
- ▶ Mayor densidad de integración → Moore
- ▶ Menor consumo estático
- ▶ Mejores prestaciones

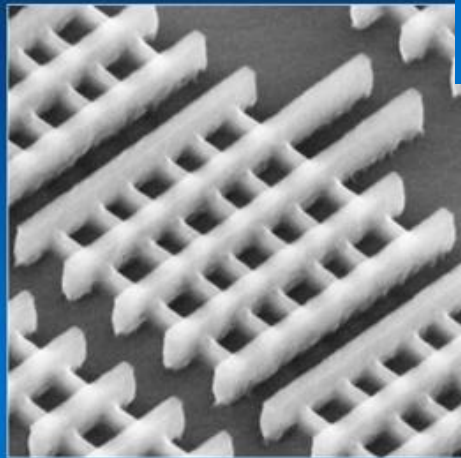
## 22 nm 3-D Tri-Gate Transistor



32 nm Planar Transistors



22 nm Tri-Gate Transistors

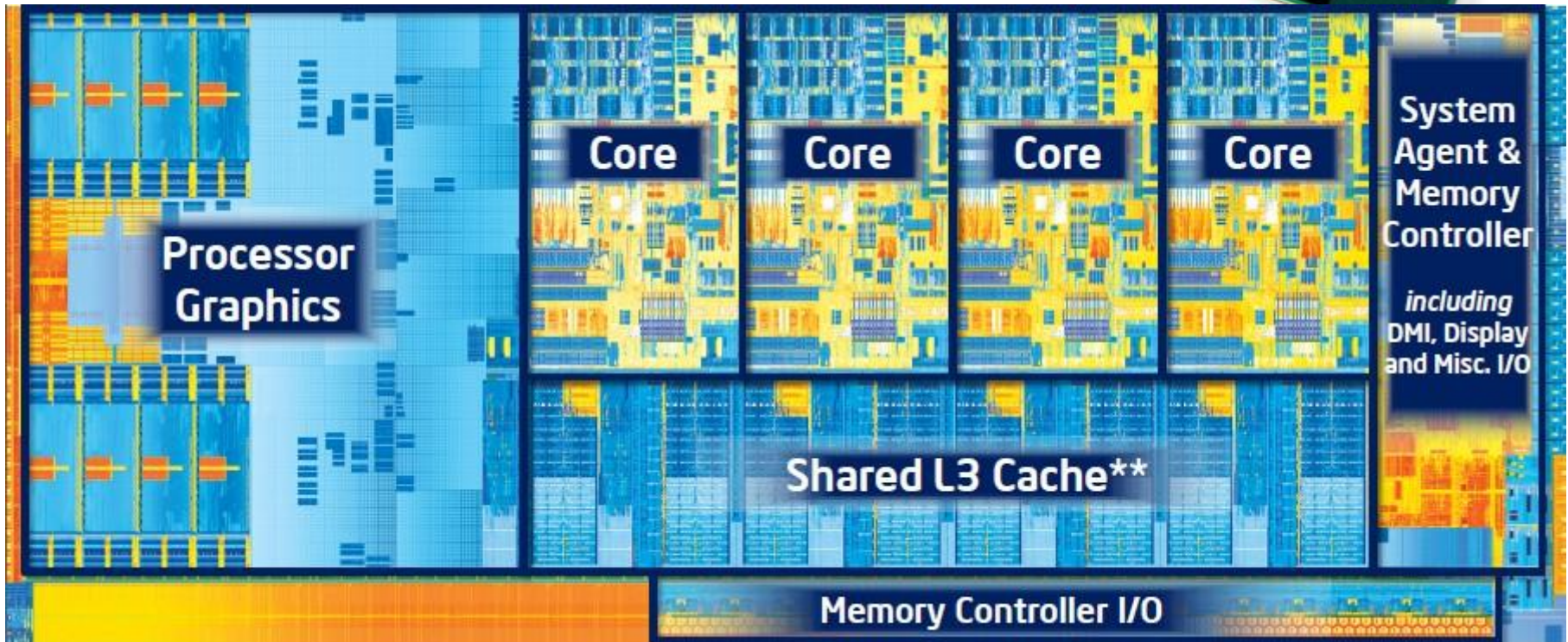


3-D Tri-Gate transistors form conducting channels on three sides of a vertical fin structure, providing "fully depleted" operation

*Transistors have now entered the third dimension!*

# Ivy Bridge

- ▶ 22nm
- ▶ Tick-tock strategy sobre Sandy Bridge
- ▶ Low Power
- ▶ GPU, USB, PCIe integrados



# Para más información

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- ▶ <http://www.tomshardware.com/news/Intel-14nm-Ivy-Bridge-Haswell,20602.html>
- ▶ <http://news.softpedia.com/news/Intel-We-Will-Begin-Mass-Producing-14nm-Broadwell-CPU-This-Year-2013-322674.shtml>
- ▶ [www.intel.com](http://www.intel.com)
- ▶ “Intel’s Revolutionary 22 nm Transistor Technology” M. Bohr., K. Mistry. [www.intel.com](http://www.intel.com)
- ▶ <http://www.itproportal.com/2012/04/24/intel-ivy-bridge-architecture-breakdown/>

