



# Fujitsu Microelectronics Viewpoint

**Shinichi Machida,**  
**President and CEO – Fujitsu Microelectronics America**

# Fujitsu's Commitment



- **Advantest and Fujitsu Microelectronics form joint venture in e-beam direct write manufacturing called e-Shuttle – November 2006**
- **e-Shuttle starts production with the first Advantest CP-based tool – November 2007**
- **Fujitsu and e-Shuttle SPIE paper on e-beam maskless prototype to optical volume manufacturing – February 2008**
  - **E-beam based prototypes are compatible with later volume production with light**
- **e-Shuttle starts production with the second Advantest tool – October 2008**

# October 2008

## Second Advantest tool in production in Mie factory



October 2008

Collaboration to prove DFEB benefits



**ADVANTEST**<sup>®</sup>

**FUJITSU**

Design & Software

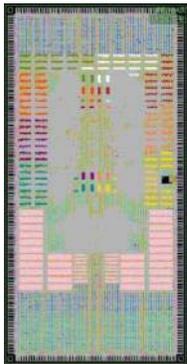
DFEB

D<sub>2</sub>S



EbDW

Design Data

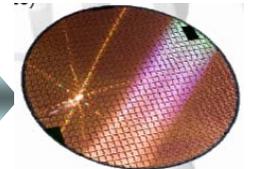


Mask (Reticle)

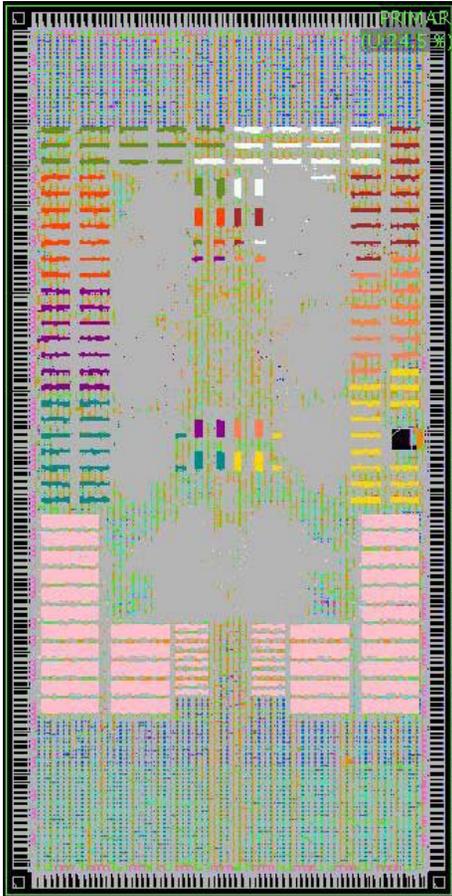
OPC  
&  
Data  
Prep

*eShuttle*

Wafers



# Results Expected in 2009



- **Fujitsu 65-nm low-power test chip**
- **e-Shuttle to manufacture the test chip**
- **Customer engagements to follow**



**Beam**  
**Initiative**