EURIPIDES Forum 2010 in Paris

September 30th – October 1st, 2010 in Paris

COSY-3D – EURIPIDES 07-302

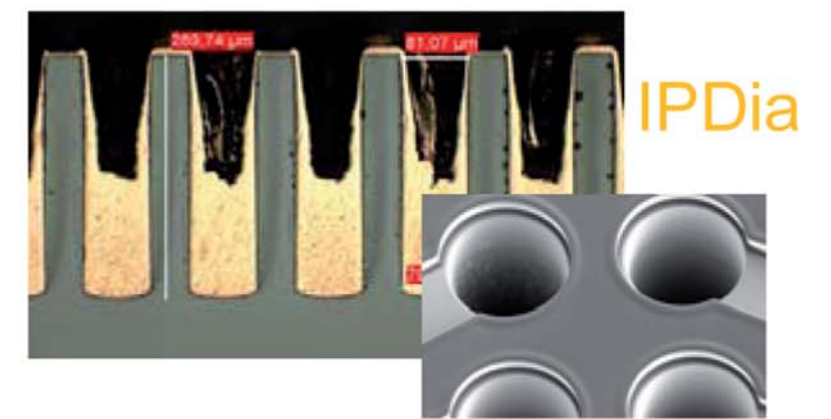## COmpact Secure SYstem in 3D

Objectives :

Collaboration with industrial, research centres and academia to create an innovative, **highly secure and portable intelligent system**, for:

- **advanced telephony,**
- **multimedia,**
- **secure transactions,**
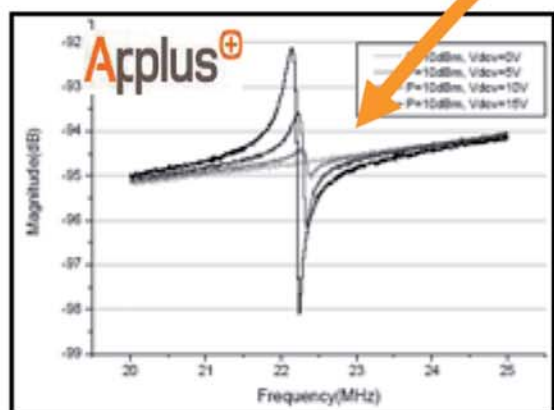- **enterprise access (digital & physical).**

Solutions;

- **Structured 3D system** enable the functions of Memory & CPU in smallest volume as possible.(LETI/GTO/Datacon)
- **Stable MEMs** based Oscillator for USB (48MHz) (VTI/VTT/UAB)
- **Si Integrated Capacitor (PICS).** Enlarge Capacity/mm^2 (250nF).
- Comparison between **vias in Si/vias in Polymer (Via Belt)** .
- All of these components will be integrated in a vertical manner at Wafer Level ; **"Front Side Connected Die Stacking"** (Gemalto-Assembly/LETI-ViaBelt/IPDIA-TSV/EMSE-Jetting&Modelisation/Datacon)

→ and will exhibit very short, vertical low capacitance interconnections with associated performance improvements over more conventional MCM approaches.(Testing Applus/Gemalto)
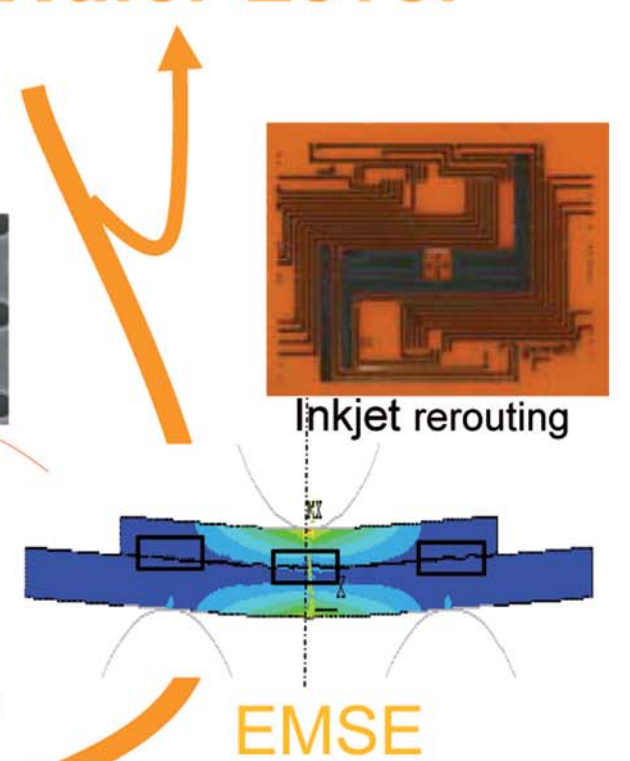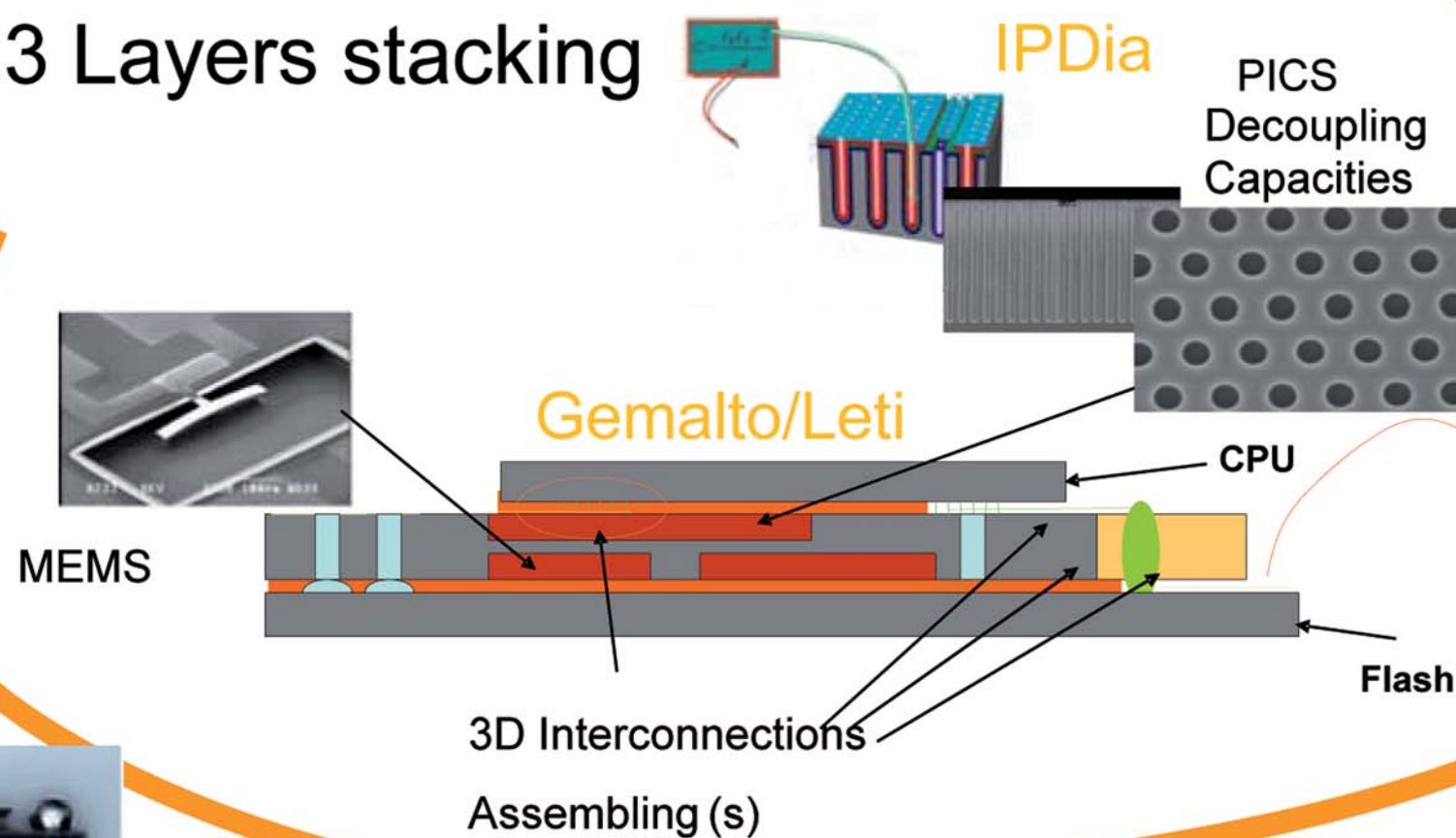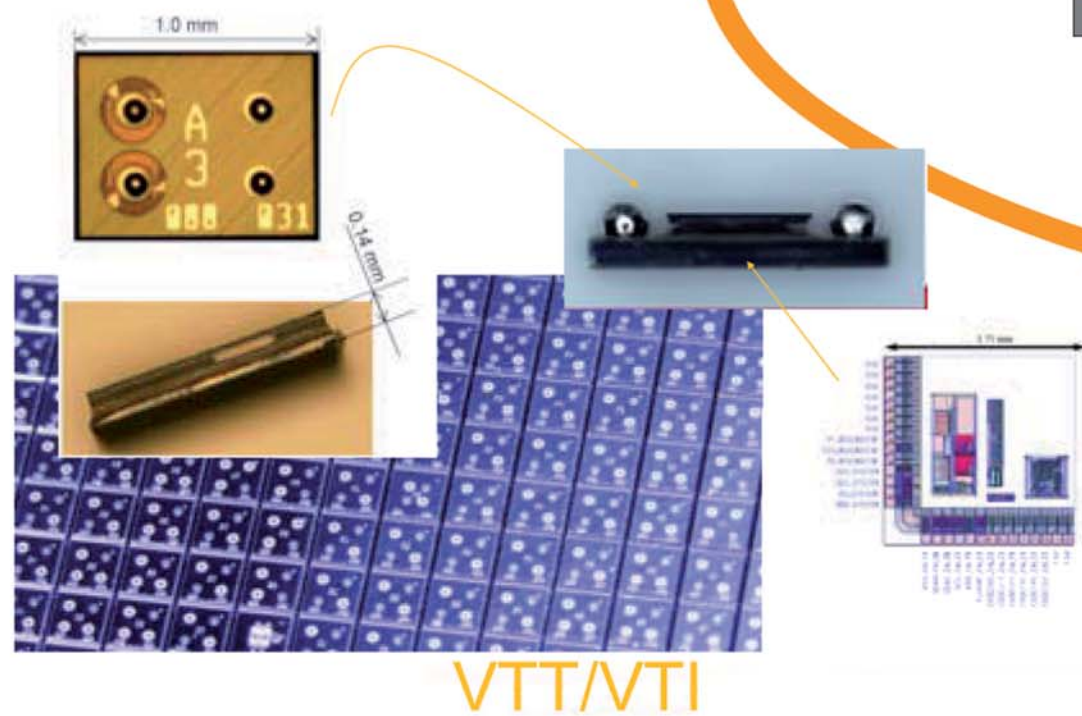

IPDia

ViaBelt by leti

Integration Wafer Level

Testing

3 Layers stacking

IPDia

PICS Decoupling Capacities

Gemalto/Leti

CPU

Inkjet rerouting
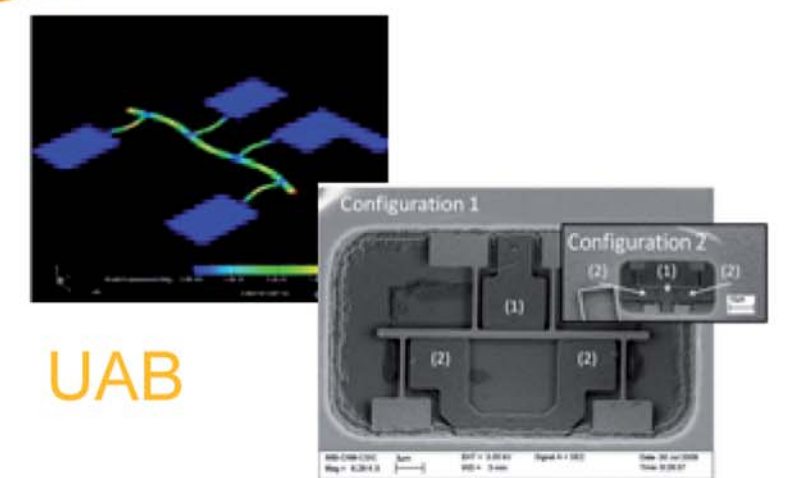
MEMS

3D Interconnections

Assembling (s)

Flash

EMSE

Component Development (Passives/Clock)

VTT/VTI

UAB