



AREVA

A modern application laboratory

Presenter's name

AREVA NDE-Solutions Germany,
intelligeNDT Systems & Services GmbH

Presenter's position

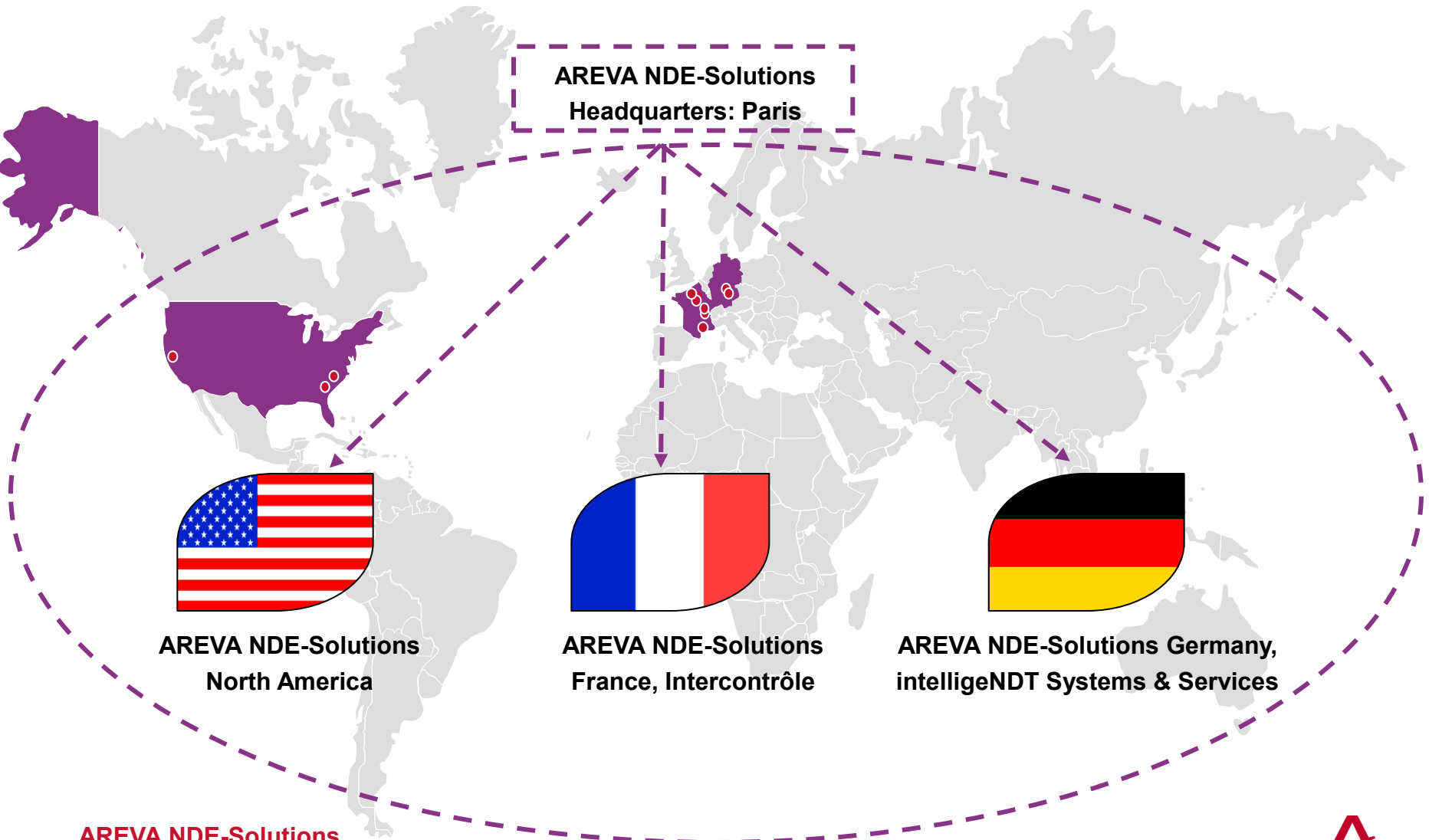
Place and Date

For External Use



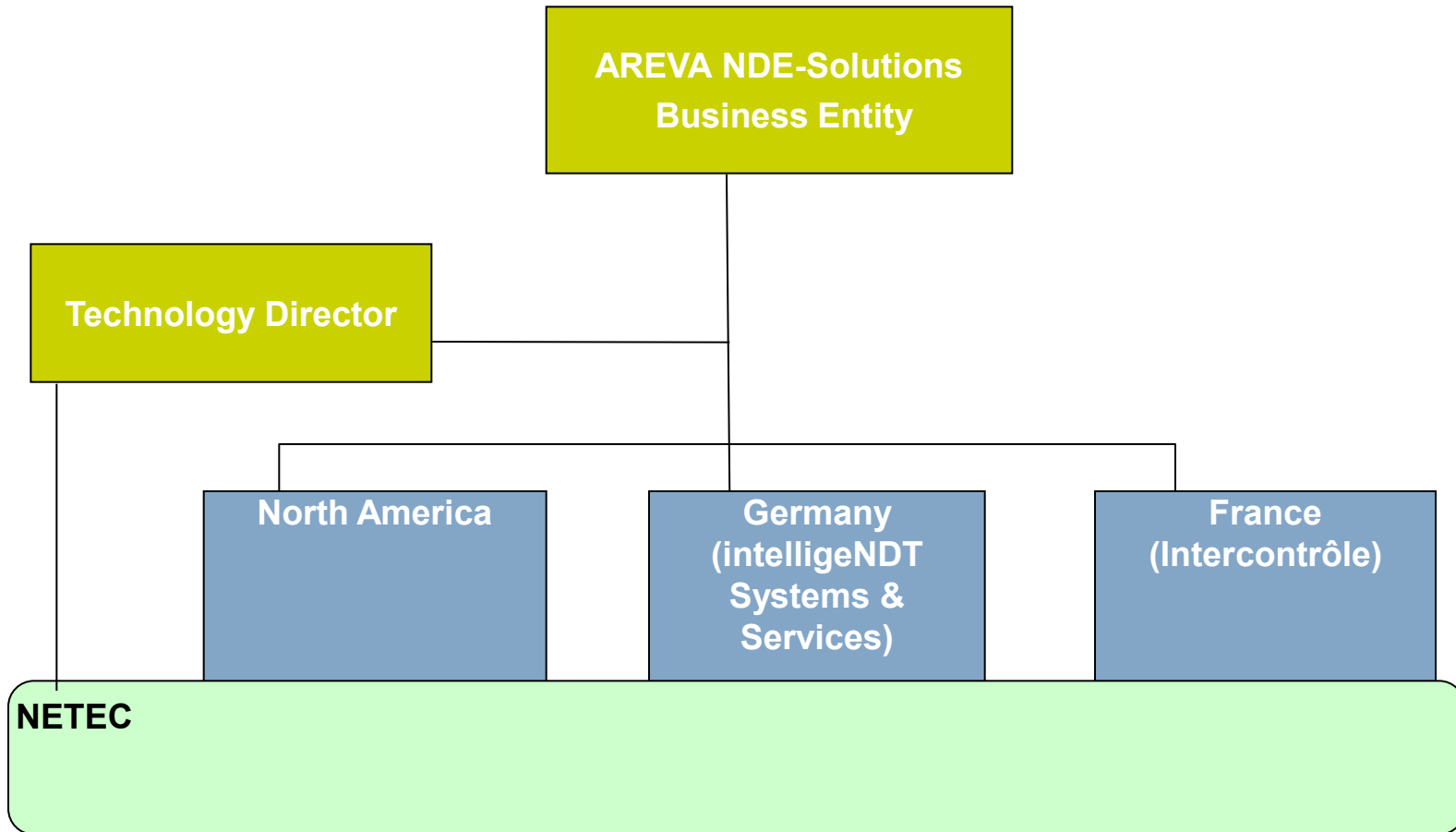
AREVA NDE-Solutions

A Global Organization with more than 700 NDE Professionals



AREVA NDE-Solutions

Global NDE-Solutions organization with more than 650 NDE professionals worldwide



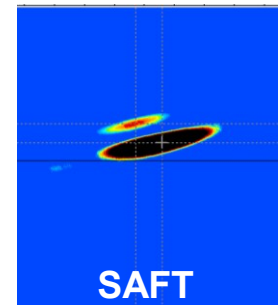
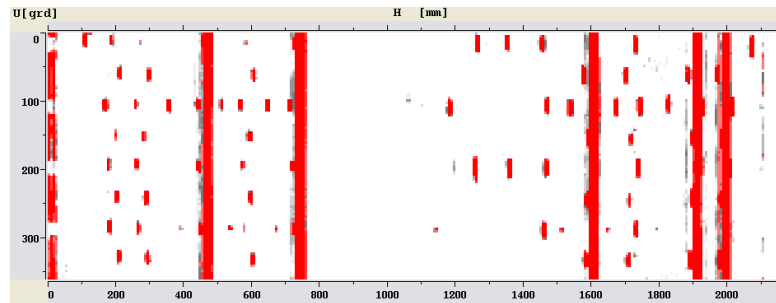
Responsibilities of a modern application laboratory

- ▶ **Competence centre**
- ▶ **Customer support in NDE questions**
- ▶ **Feasibility studies**
- ▶ **NDE technology improvements**
- ▶ **Application specific probe development and fabrication**
- ▶ **Industrialization**
- ▶ **Commissioning**
- ▶ **Functions tests (FAT)**
- ▶ **Qualifications**
- ▶ **Blind tests**
- ▶ **After sales**
 - ◆ **Helpdesk**
 - ◆ **Hotline**
 - ◆ **On-site support**

Responsibilities of a modern application laboratory

► Inspection of wheel set hollow axles

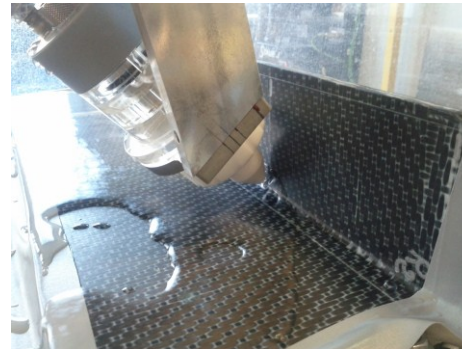
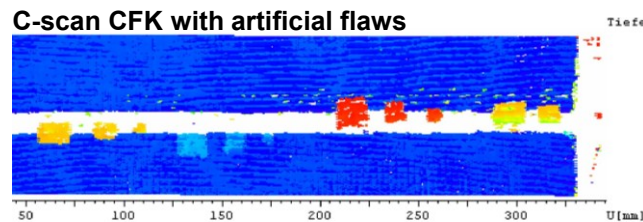
- ◆ Detection and sizing
- ◆ Helix scan
- ◆ Phased array
- ◆ SAFT



Responsibilities of a modern application laboratory

► Double robot system

- ◆ Simple mode and synchronized acquisition
- ◆ CFK inspection with different techniques e.g. Phased array, squirter, immersion
- ◆ 3D acquisition



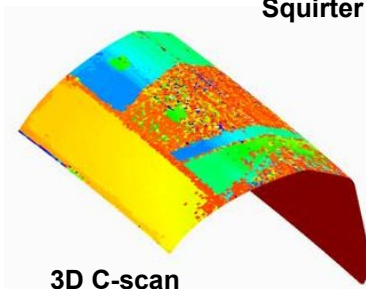
Squirter technique



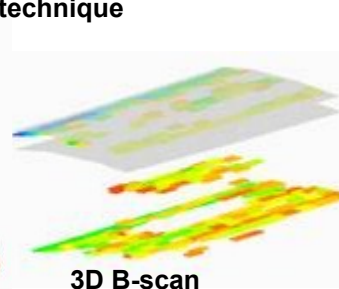
Tank for immersion technique



CFK test piece



3D C-scan

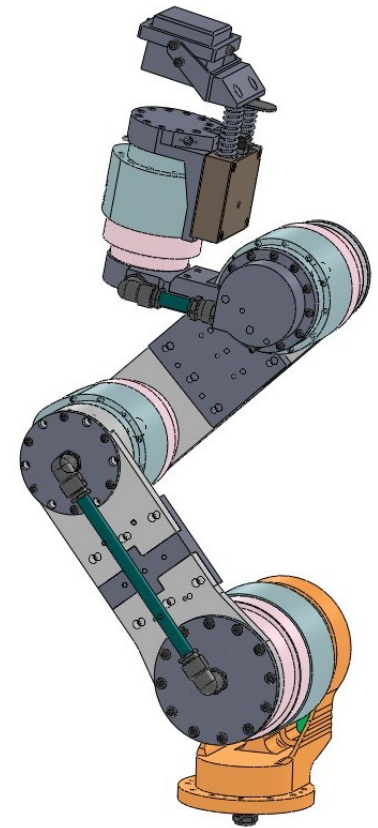


3D B-scan

Responsibilities of a modern application laboratory

► LWR – light weight robot arm

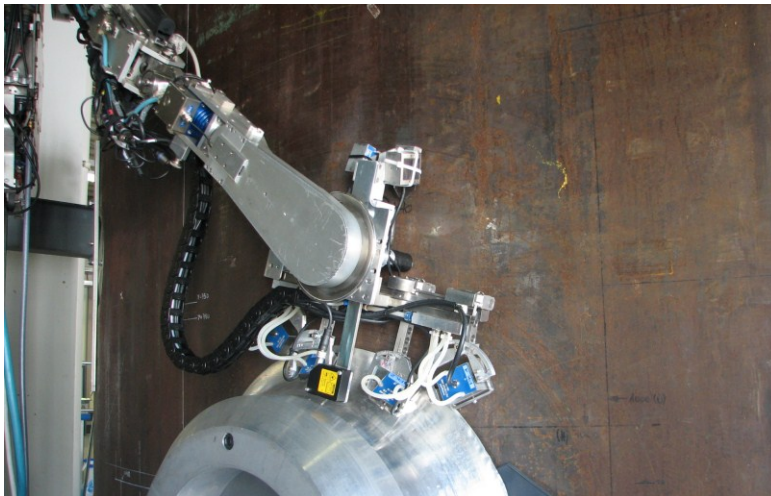
- ◆ Light weight: < 10 kg (without transducer system)
- ◆ Action range can easily be adapted by exchanging connector plates between the joints
- ◆ Inspection of complex geometrics as in nozzle weld joints
- ◆ Smooth movement due to Schunk modules axes
- ◆ Positioning accuracy better than ± 1 mm
- ◆ Run velocity of up to 50 mm/s



Responsibilities of a modern application laboratory

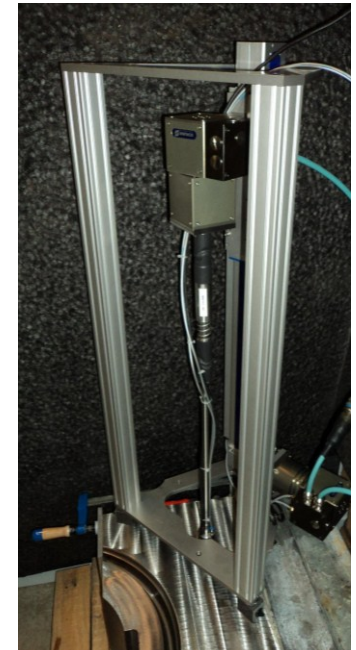
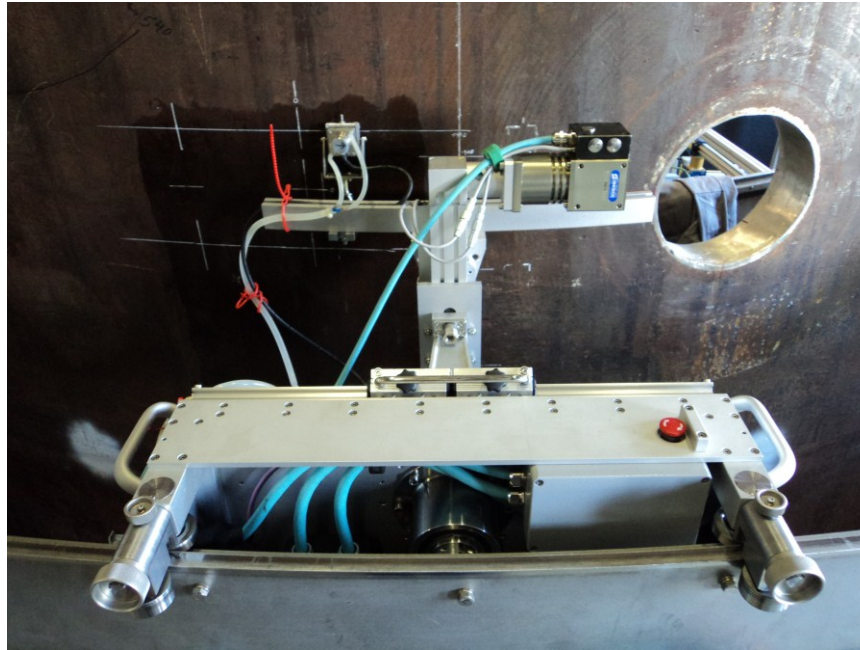
► SRM – manipulator for boiling water reactors

- ◆ 6 axle robot system
- ◆ Universal system for circumferentially, longitudinal and nozzle welds
- ◆ modular structured



Responsibilities of a modern application laboratory

► 2D manipulators

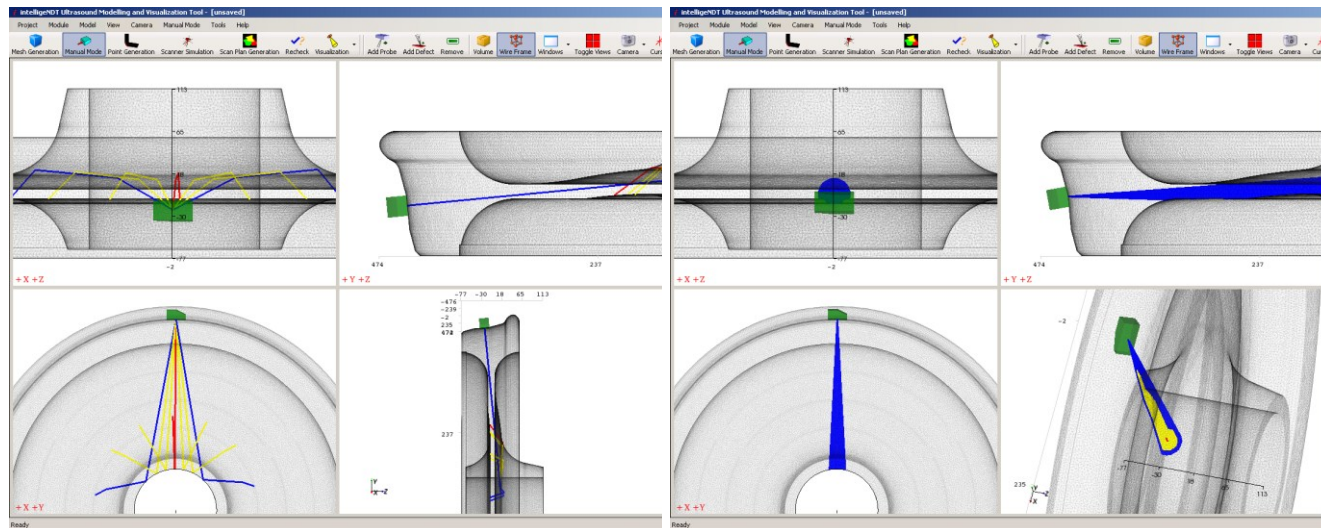


Responsibilities of a modern application laboratory

► Simulation software

◆ 3D-iMaV (Modeling Software)

- Mesh Generator – Supports an easy generation of standard geometries
- Visualization of the full beam path in the 3D model
- Scan Plan Generation
- Combination of modeling, control unit, analysis software

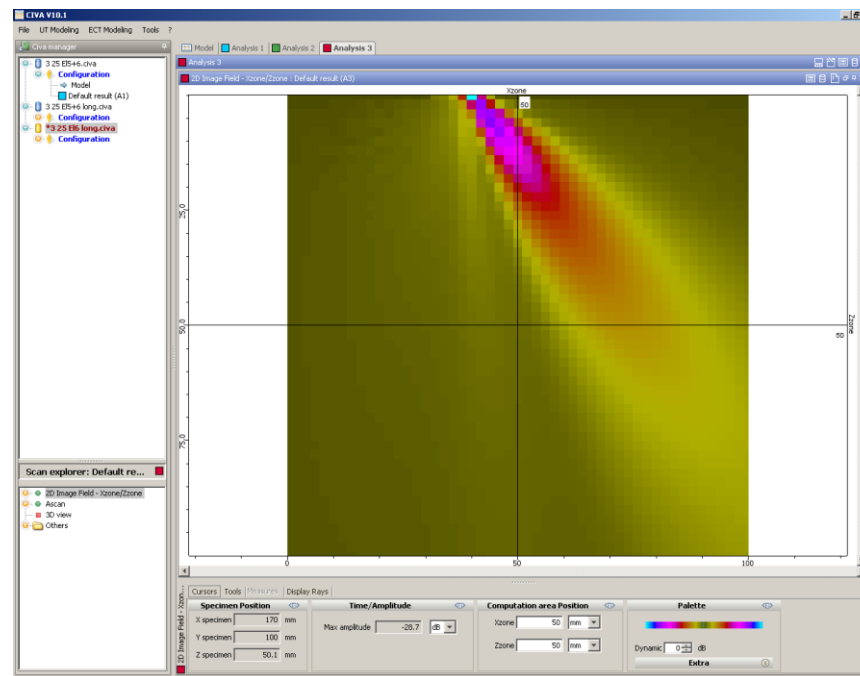


Responsibilities of a modern application laboratory

► Simulation software

◆ CIVA

- Simulation of ultrasonic sound fields



Note

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