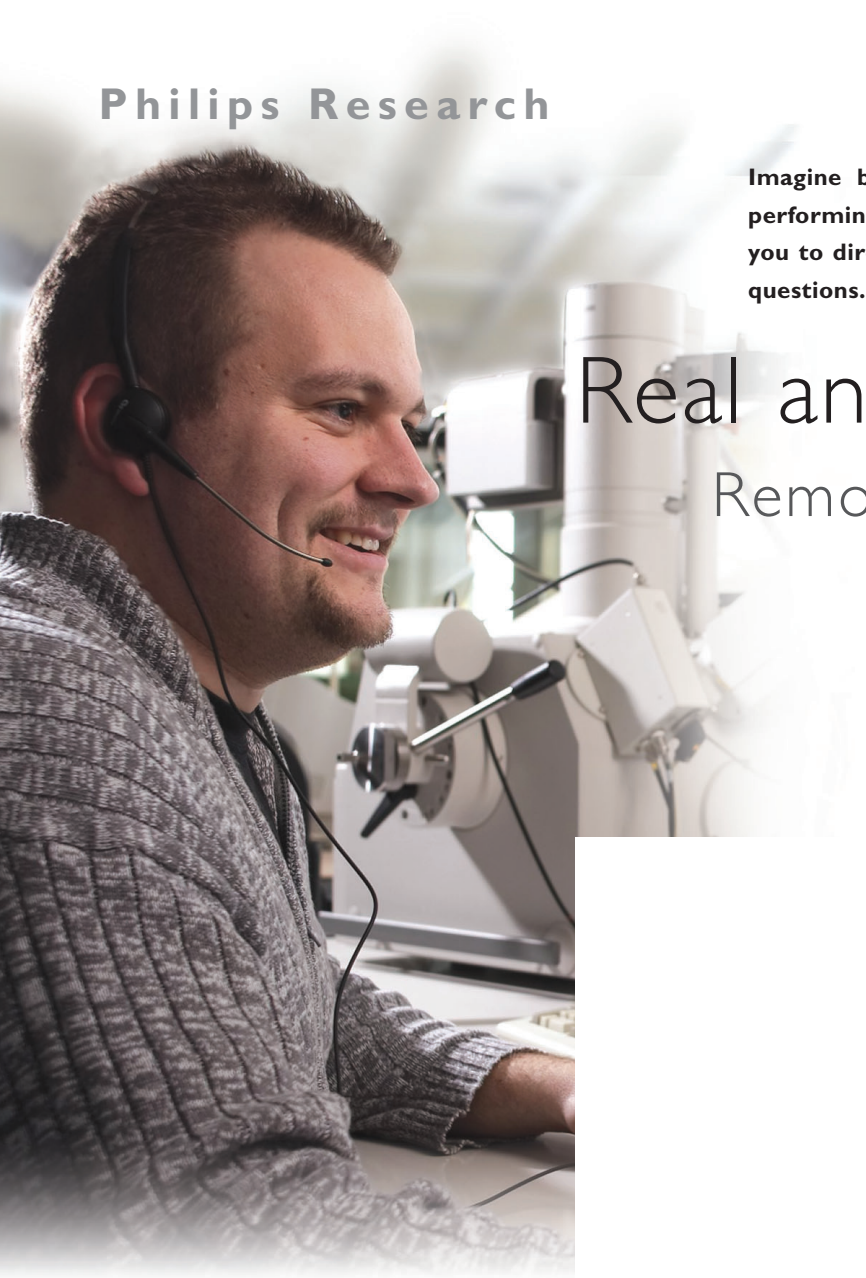
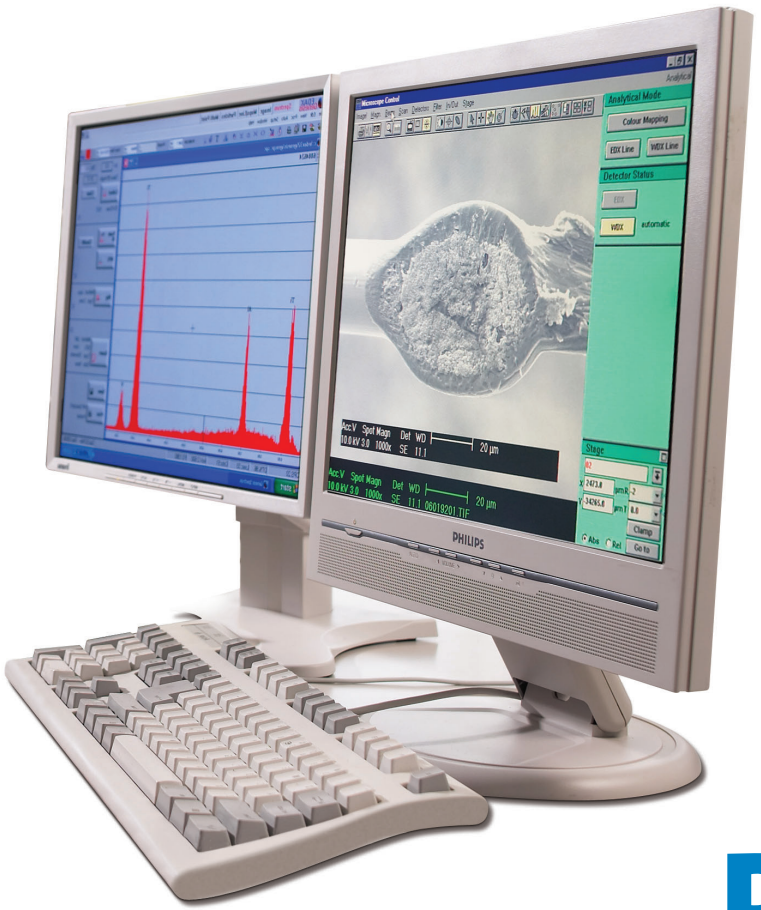
Philips Research



Imagine being able to follow what a specialist is seeing with a microscope on the other side of the world; performing analysis on your sample. This interactive way of research is now possible using the Virtual Lab. It allows you to directly discuss new data via the internet and interactively convene to reach a conclusion on your analytical questions. MiPlaza Materials Analysis offers such a worldwide virtual laboratory for materials characterization.

Real analysis in a virtual lab

Remote materials analysis - by internet



MiPlaza

PHILIPS

Analytical versatility and cost effectiveness

R&D departments in industry make extensive use of advanced analytical laboratory equipment, such as electron microscopes and instruments for surface analysis. Due to high initial investments, substantial operational costs, and the expertise required to operate the equipment, laboratories tend not to have the entire range of equipment in-house.

Outsourcing analytical requests to an external supplier of analytical services is an alternative that is frequently used. However, direct communication between analyst and problem owner during the analysis is cumbersome and often absent.

Interactive studies

In many cases it is far more effective if the problem owner collaborates closely with the analyst during the analysis of the sample. MiPlaza Virtual Lab allows the problem owner to "look over the shoulder" of the analyst. While sitting in front of his own PC he can exchange ideas with the analyst about the strategy and the results during the analysis. In addition, the analyst can invite additional remote experts to assist in the interpretation of the data during a session. For a restricted number of instruments it is even possible to allow the remote expert to take over control of the instrument.

This distributed collaborative environment enables a shorter turn-around time for analytical requests. Apart from the financial merits, it also paves the way for a new range of services, such as remote consultancy, remote training, and interactive problem solving.

Operational flexibility

The analyst at the instrument creates a session in a web-based environment. The remote client connects to the same website and enters the session using a session-dependent password. Depending on the type of analysis, the remote client can enter either a 'view-only' mode or an interactive mode.

Each session can be attended by a group of remote users, each user being located at his own PC anywhere in the world.

The process of inviting a new remote client to the actual interactive session only takes a few seconds, enabling fast interactive communication routes.

The virtual lab offers:

- Remote access to a growing selection of advanced analytical tools, such as instruments for Transmission Electron Microscopy (TEM), Scanning Electron Microscopy (SEM), Focused Ion Beam (FIB), X-ray photoelectron spectroscopy (XPS) and Time-Of-Flight Secondary Ion Mass Spectrometry (TOF-SIMS).
- Confidentiality during remote sessions.
- Authorised access only to own data and pre-booked equipment.
- Easy hook-up of additional equipment.
- A platform that is compatible with security policies of ICT infrastructures of Philips and external partners.

Unique

The concept of remote operation of advanced equipment, linked to applications for collaboration, is already being used in the scientific world. In most cases these examples consist of one-on-one applications (i.e. one remote terminal and one target machine), where security and accessibility issues need not be addressed in a generic way.

The MiPlaza Virtual Lab promises to be one of the first of its kind in the world, providing a combined collaborative environment for academic and industrial materials science.

Philips Research Materials Analysis offers a full range of analytical methods and expertise to support both research and manufacturing, serving customers by taking an integral, solution-oriented approach.

making the invisible visible

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http://pww.natlab.research.philips.com:25222/

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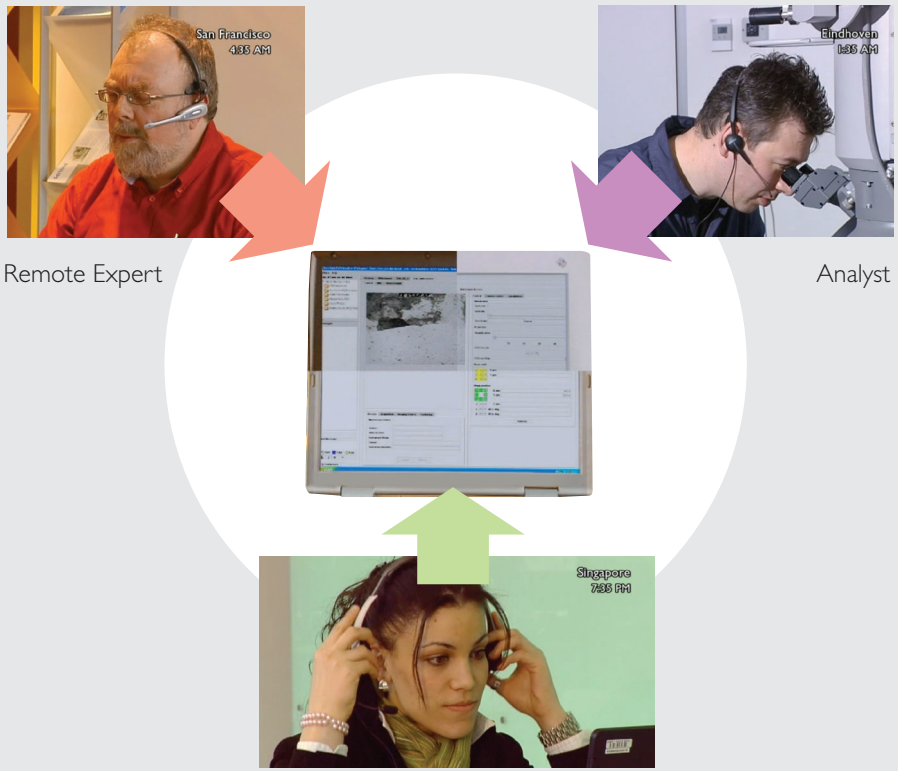

Remote Expert

Analyst

Problem owner/remote client