

New projected augmented reality system amplifies value of expert knowledge

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The new augmented reality system allows remote experts to project their instructions directly on to the equipment being used by on-site personnel.

VTT Technical Research Centre of Finland and Thales Alenia Space Italy have developed a prototype system allowing remote experts to project their instructions directly on to the equipment being used by on-site personnel. The new projected augmented reality system will be further developed and commercialized through the recently launched VTT's spinoff Delta Cygni Labs.

Expert knowledge is necessary to support the operation, maintenance, and repair of complex [equipment](#) in aerospace, energy, transport, machinery and other industries. An expert can help solve critical

problems for which on-site personnel are unprepared. Travel to the equipment is nonetheless time-consuming and often expensive.

VTT and Thales Alenia Space Italy have developed a [prototype system](#) that implements a new collaboration paradigm: connecting the remote expert and on-site personnel by projecting the expert instructions directly on to the equipment.

The key practical advantage of this system is its high usability. For the remote expert, it is as easy as pointing at the equipment with a remote [laser pointer](#). Instructions projected directly on to the work area can be seen simultaneously by several on-site personnel without the need to wear glasses or other devices or use displays. The system also helps to shorten equipment downtime by leveraging expert knowledge without delay, while saving on travel costs.

Demonstrations were held at Thales Alenia Space Italy and ALTEC in Italy in December 2012. The system received very [positive feedback](#) from the representatives of industry for its usability and application potential in complex assembly and maintenance on ground and in space.

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Provided by VTT Technical Research Centre of Finland

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