

## **mobiPV**

The mobile Procedure Viewer or mobiPV is a technology development initiative funded by ESA under contract 4000107062/12/NL/LvH and developed by Space Applications Services, Belgium and Skytek, Dublin as subcontractor.

Astronauts on the ISS today read and execute procedures during their on-board tasks using laptops which limit their mobility and current facilities do not allow specialists on the ground to view the crew-member's task/work environment during real-time support.

mobiPV is a mobile solution based on contemporary handheld and wearable computing technology that allows astronauts to execute task-specific procedures during on-board operations. The procedures are XML files based on the Operations Data File (ODF) standard which define operations documents for on-board tasks and are stored in ISS flight databases. mobiPV enables astronauts to live stream their workspace, share notes and task progress with specialists at mission control and vice versa; providing an unprecedented task execution and situational awareness solution so far unavailable on the ISS.

The mobiPV flight segment comprises of a wrist-mounted Android smartphone integrated with a head-mounted camera and audio headset as the main computing unit with an iPad providing "assistive" functions. In a parallel contract, Google Glass has been added to the system as an alternative configuration for hands-free, heads-up procedure execution. Ground specialists are provided with a laptop running the mobiPV software with a camera and audio device to communicate with the crew-member. A tablet version of mobiPV could replace the laptop if mobility is required.