

Plug-and-work Protocol Adopted

Open Geospatial Consortium has adopted the PUCK standard, which facilitates plug-and-play connections of electronic equipment. The standard is relatively simple, and several manufacturers have already implemented the protocol in their instruments' firmware. It augments existing instrument command sets without replacing them, so it can be implemented without abandoning existing firmware and software applications. The standard was originally developed by the Monterey Bay Aquarium Research Institute (MBARI) for oceanographic applications, but is useful in any sensor network containing RS232 or Ethernet-connected instruments.

Most sensor networks require careful manual installation and configuration by technicians to assure that software components are properly associated with the physical instruments that they represent.

Instrument driver software, configuration files, and metadata describing the instrument and its capabilities must be manually installed and associated with a physical instrument port. Sometimes these manual procedures must be performed under physically challenging conditions, increasing the chances of human error. PUCK addresses these challenges by defining a standard instrument protocol to retrieve metadata and other information from the device itself. This information can include OGC SWE SensorML and IEEE 1451 Transducer Electronic Data Sheet (TEDS) documents, as well as actual instrument driver code. Computers on the network can use the PUCK protocol to retrieve this information from installed instruments and utilise it appropriately, e.g. to automatically identify, configure and operate the instruments. Thus PUCK enables automatic self-configuring 'plug-and-work' sensor networks.

PUCK-enabled instruments have been deployed on ocean observatories in the USA and Europe, and the protocol is being considered for adoption by other projects as well. With the approval by the OGC membership of the OGC PUCK Protocol Standard, and with the OGC Technical Committee's PUCK Standards Working Group in place to provide future support, the PUCK standard is expected to be adopted by an even wider sensor community.

<https://www.hydro-international.com/content/news/plug-and-work-protocol-adopted>
