

SpWRT

SPACEWIRE-RT

JOINING TECHNOLOGIES TO DO MORE WITH LESS

With the growing trend towards “Operationally Responsive Space”, demand is increasing for more flexible spacecraft that can be assembled to meet a specific mission requirement and launched quickly. The SpWRT project responds to this demand, paving the way for enhanced cooperation between the EU and Russia in this exciting technology field.

The success of future space missions is linked closely to our ability to design spacecraft that are both flexible and able to be assembled rapidly to meet specific customer demands. Flexibility in this respect is a synonym for the ability to build spacecraft that can be adapted from one mission to another, in order to respond to mission specific needs. Rapid assembly implies fast integration of pre-build components that can be configured to meet a wide range of space mission requirements.

Striving to achieve more, rapidly and at lower cost, spacecraft designers see a need for enhancing the degree of joint technology standards between space faring nations.

The SpWRT project is set to promote such interoperability between EU and Russian space technologies. The project aims to provide a flexible, robust, responsive, deterministic and durable standard network technology for spacecraft avionics i.e. spacecraft onboard data-handling and control electronics.

SpWRT will improve the existing SpaceWire protocol in a number of ways, such as adding a quality of service layer.

Such developments may pave the way for a new EU-Russia standard in spacecraft plug-and-play network technologies, thereby creating a strong technical platform for further joint advances at the payloads and avionics level.



STEVE PARKES
IS PROJECT COORDINATOR



SpaceWire Router Testing © SpWRT

SpWRT promotes the development of a new joint EU-Russia standard in spacecraft onboard networking technologies.

QUESTIONS & ANSWERS

What do you want to achieve with this project?

An enhanced SpaceWire network technology that provides quality of service capabilities suitable for spacecraft data-handling and control applications, and which is able to support rapid assembly of spacecraft. A strengthened technological collaboration between Europe and Russia.

Why is this project important for Europe?

SpaceWire is a European technology used by the world's space agencies and space industry on many spacecraft. The SpaceWire-RT project aims to take this technology to the next level, enabling it to support rapid spacecraft assembly and making it applicable to other applications.

How does your work benefit European citizens?

Space technology is now a part of everyday life: weather images, satellite navigation, broadcast TV, and telecommunications. SpaceWire-RT will provide a standard networking technology for use onboard satellites, reducing their cost, and enabling them to be built more quickly.

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LIST OF PARTNERS

- University of Dundee, United Kingdom
- St Peterburg University of Aerospace Instrumentation, Russia
- Submicron, Russia
- ELVEES, Russia
- Astrium GmbH, Germany

COORDINATOR

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PROJECT INFORMATION

SPACEWIRE-RT (SpWRT)

Contract no: 263148

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EU Contribution: € 499.997

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