EUROMIR95 20th Anniversary

The significance of the EUROMIR95 Mission for Columbus Operations and for the Columbus Control Center (Col-CC) at DLR-GSOC Oberpfaffenhofen

The 179-day flight (launched 3rd September 1995) of ESA astronaut Thomas Reiter onboard the Russian Space Station Mir came to a successful end on 29 February 1996 with the safe landing of the Soyuz TM-22 capsule near Arkalyk in Kazakhstan.

The Euromir 95 crew consisted of the Russian cosmonauts Commander Yuri Gidzenko and Engineer Sergei Avdeev, and ESA Astronaut Thomas Reiter.

This mission, referred to as EUROMIR 95, was part of ESA's precursor flight program and followed the EUROMIR94 mission (3 Oct - 4 Nov, 1994).The overall preparations to implement these two missions were started in spring of 1993, when first negotiations with the responsible Russian space company, RSC Energia of Moscow, were initiated.
One of the major objectives reflected in the Resolutions adopted at the ESA Council meeting at ministerial level in Granada on 10 November 1992 was to widen and strengthen international cooperation, hereby taking into account the evolution of the geopolitical context. Particular emphasis was given to an intensification of the cooperation with the Russian Federation (ESNCM/ CIV/Res.3 (Final)).

Consequently, ESA and the Russian Space Agency signed an agreement to cooperate on manned space infrastructure and space transportation systems in the 1993-95 timeframe. Two major space station elements (European Robotics Arm-ERA and a new MIR Data Management System -DMS-R) were developed in the framework of this intensified cooperation. EUROMIR 94 and EUROMIR 95, the two missions of ESA astronauts on board the Russian space station Mir, were also a result of this cooperation.
Also defined as “Columbus Precursor Flights”, EUROMIR 94 and EUROMIR 95 had the following general objectives: to prepare the European space user community, i.e., ESA and the participating states, for their involvement in the International Space Station; to provide continuing flight opportunities for the user community to bridge the period until the International Space Station is operational; to provide in-flight validation of design concepts of the Columbus Orbiting Facility (COF) and its payloads, e.g., serviceability and telescience, and to introduce, as far as feasible, the operations concepts intended to support experimentation onboard the COF; to build-up and maintain a core of ESA astronauts and to provide them with flight opportunities in order to improve European experience in crew space operations.

The confidence and proficiency gained during the EUROMIR95 long-duration mission contributed to the official appointment of “Columbus Control Center” (Col-CC) by ESA on 31 March 2003 significantly.

Since DLR’s German Space Operations Center GSOC) in Oberpfaffenhofen was designated as the European Control Center for human space operations and had completed the basic Columbus Control Center architecture in 1991 using so called “advanced national funding” since 1988, the ESA EUROMIR 95 (EM95) Operations Support contract was awarded by to DLR on 12. December 94, only 8 months before the then planned Soyuz TM-71 launch date.
It was therefore necessary for DLR to perform the design, implementation and testing of the Ground Network Infrastructure (GNI), to prepare for the operational tasks and to conduct the simulation and training activities within a very tight schedule.
Thanks to the experience gained during the FSLP (1983), D-1 (1985) and D-2 (1993) missions and the readily available basic ground infrastructure including trained operations personnel it was possible to be ready for launch support on 3rd Sept and conduct the 179 day mission without any major ground operations problems within the allowed ESA budget.

The confidence and proficiency gained during the EUROMIR95 long-duration mission contributed decisively to the official appointment of GSOC as "Columbus Control Center" (Col-CC) by ESA on 31 March 2003 and its smooth integration into the international ISS control infrastructure as an equal partner for the Russian control center (ZUP), the NASA control center in Houston and the international User Community.

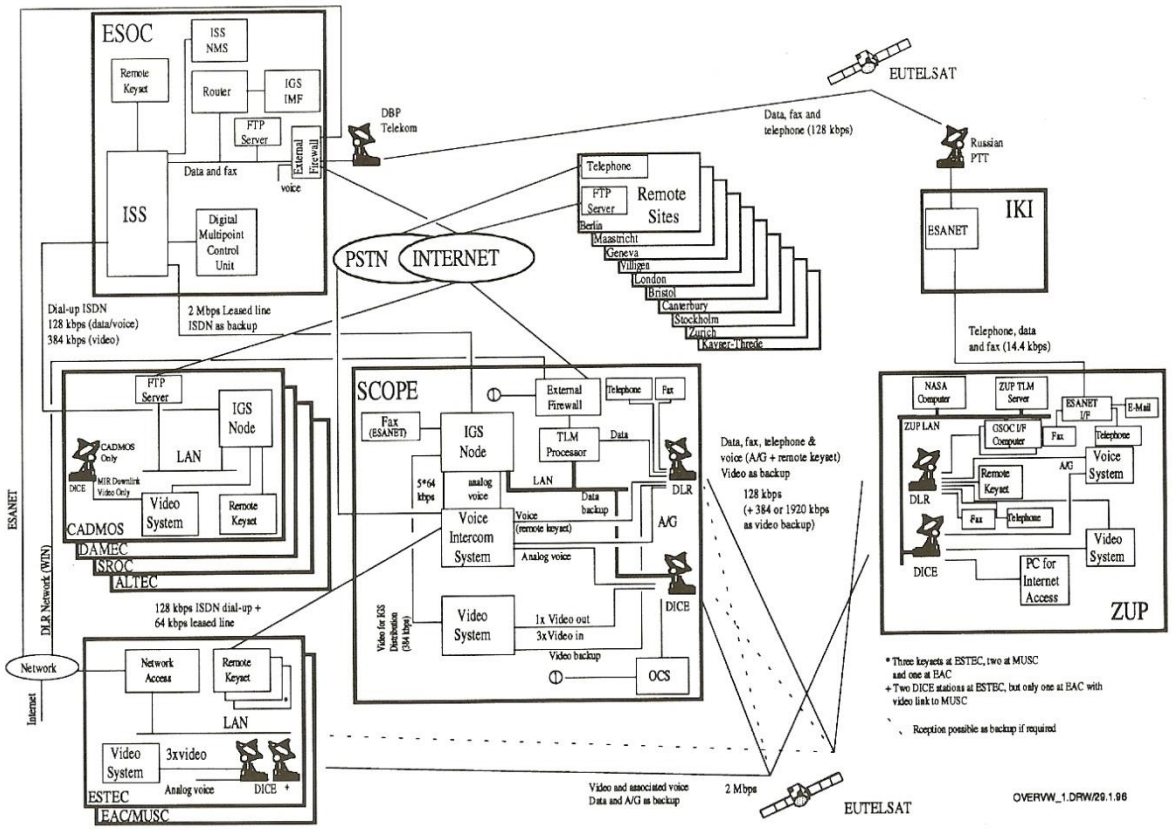

Fig.1 EUROMIR 95 Ground segment
SCOPE = System for Control of Operations of Payloads for EUROMIR hosted by DLR/GSOC, Oberpfaffenhofen

Onboard soundclip

Saluting the Euromir95 crew with a 2 min sound clip recorded at the control center O'hofen (SCOPE) on Saturday morning, Feb 10th 1996, from the MIR station (click link below).
The classical music was sent from ZUP to the crew on the "air-to-ground" communications channel for entertainment during the crew's recreation time. In the background you hear the MIR station sounds and the crew. The outages are due to communication link disturbances.
Enjoy the relaxed atmosphere onboard of MIR!
http://opsjournal.org/assets/Euromir95_clip.mp3