

TELEMEDICINE FOR THE ISS - JEM

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Action Items for the International Space Station telemedicine

- Standardized medical recording format
- High-resolution medical imaging
- Multi-national networking - World Wide telemedicine consultation network
- Training syllabus for the crew



Do we have infrastructure ?

- Many (too many) systems have been developed for ground use.
- ISS has NTSC video bus.
- Image compression and extra relay satellite (e.g. NASDA DRTS) will do the job.

Telemedicine Program examples by ISS International Partners

- NASA
INTEGRATED STRATEGIC PROGRAM PLAN FOR
TELEMEDICINE
- EUROPEAN SPACE AGENCY
GOOD EUROPEAN HEALTH RECORD
- RUSSIAN SPACE AGENCY
SPACE BRIDGE (RUSSIA/NASA)
- DLR (GERMANY)
HYPER-G/HYPERWAVE
- CNES (FRANCE)
EUROPEAN TELEMEDICINE FOR MEDICAL
ASSISTANCE

Universal telemedicine standard is desired for the
ISS medical operations.

- REMOTE CONSULTING PROCEDURE
(GROUND TO GROUND).

- MEDICAL DATA EXCHANGE AMONG
ISS PARTNER COUNTRIES, etc.

Why do we need space telemedicine ?

- TO SUPPORT HUMANS IN EXTREME ENVIRONMENTS, i.e. OUTER SPACE.
- LEAD TIME FOR EMERGENCY CREW RETURN FROM THE INTERNATIONAL SPACE STATION IS 24 HOURS.
- INTERNATIONAL, MULTICULTURAL CREW.
- GETTING US READY FOR INTERPLANETARY MISSIONS.

NASDA telemedicine projects

- High-definition TV system
 - STS-95 and JEM
- Ophthalmological slit lamp apparatus
- Onboard X-ray imaging
- Ground network connection from Tsukuba Space Center medical console