

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)
Integrated Applications End-to-End Solutions (1)

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SPACE FOR HEALTH

Abstract

Space is playing an increasing role to support health on Earth, in the field of

- Environmental health: space helps in the monitoring of air, water and UV-radiation for example
- Public health: although not widely known, space supports public health using the broad selection of assets at its disposal for disease surveillance, disaster relief and emergency or patient management
- Wellness: research being carried out in conjunction with preparing astronauts to survive the conditions of spaceflight is contributing towards terrestrial applications
- Medicine: space plays a significant role in research, diagnosis and treatment, emergency and disaster, education, and even biomedical engineering

Up to now a ‘vertical’ approach (i.e. by space domain) has been used to work with users: telecommunication and navigation, earth observation, human spaceflight, etc. However, the daily health-related projects and challenges encountered by the health providers can usually only be solved by an integrated approach, where the expertise and assets of very diverse bodies must be brought together. This approach is being implemented currently at ESA with the creation of the Integrated Application Promotion programme (or ARTES 20). The IAP initiative was created in order to improve synergies across ESA’s vertical directorates, to raise awareness of new user communities, and to promote synergies. A number of activities in the domain of health have been initiated especially in two main areas: Disease risk mapping (earth observation and satellite navigation/ positioning) and remote access to health care (satellite communication, satellite navigation/positioning, human spaceflight technologies). In addition, ESA launched a portal embracing its health-related activities across all directorates of the Agency, and spanning all types of work and projects within the theme of Health. This website provides an overview of health-related applications, covering recently completed and on-going projects and is aimed at citizens, healthcare professionals, industry, and researchers. It provides an overview of what space can do in the area of health, and of the different space assets and what ESA can offer and how to work with ESA. The interested parties can also easily see which of the Agency’s diverse assets can be used for health applications in particular Earth observation, Satellite communications, Satellite positioning and navigation, Human spaceflight, Technology RD.