SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
TO BOLDLY GO - SPACE STATION EDUCATION AND OUTREACH (5)

Author: Mr. Susumu Yoshitomi
Japan Space Forum, Japan

KIBO HI-VISION EARTHVIEW EDUCATIONAL SYSTEM DEVELOPMENT

Abstract

"KIBO Hi-Vision EarthView" is a JSF lead Educational System enabling students, teachers, and the public to receive "live" high definition television (Hi-Vision) images from KIBO, nick name of Japanese Experimental Module (JEM) of International Space Station (ISS). We expect that Hi-Vision images will be distributed to young generations of not only Japan but also any other countries, especially Asian and US. Three components of KIBO, such as a pressurized module, a pressurized logistic module and an exposed facility, were already attached in 2008 and 2009. Our system development is strongly supported by Japan Aerospace exploration Agency (JAXA) that planes to install 2 sets of Hi-Vision camera on KIBO's exposed facility in 2011. High school or Junior High school students request to take live images of specific locations around the world. Concept of this system comes from ISS EarthKAM, a NASA educational system, which is managed and operated by the team of University of California at San Diego under direction of Professor Sally Ride who is a first American Woman astronaut. She initiated original project called KidSat in 1995, in which KidSat camera flew on three space shuttle flights. In 1998, they renamed this to ISS EarthKAM. Both system use electronic still camera. NASA and JSF basically agree working together once KIBO Hi-Vision EarthView will be operational. The live Hi-Vision image viewing and accompanying learning guides are fantastic resources to study global environmental problems, natural disasters, Earth and space science, geography, geology, social study, culture, communications, and so on. We also expand this program to Asian-Pacific region countries by using the framework of APRSAF (Asian Pacific Region Space Agency Forum). In January 2010, we had 16th APRSAF meeting at Bangkok, the Thailand and presented our program for asking participation and support in each country, because it is obvious that we are facing difficulties of local languages in Asian counties. That is why we need strong support by each space agency. The live Hi-Vision image will be transmitted by JAXA's advanced telecommunications satellite WINDS (Wideband InterNetworking engineering test and Demonstration Satellite) from JAXA Tsukuba Space Center to each country in Asia. Our project was started from December 2009 with project fund from the Ministry of Education, Culture, Sports, Science and Technology(MEXT) and we will complete system development by the end of March 2012. In this presentation, we would like to introduce our overall system architectures and how it works.