

**ANNEX 1**  
**to the**  
***Declaration of Intent by Member Agencies of CEOS for Cooperation on***  
***Mid-Resolution LSI Satellite Systems in Support of the CEOS***  
***Implementation Plan***

**A Cooperative Project Plan**  
**for**  
**Enhanced User Access to Mid-Resolution LSI Satellite Data**

**Background**

The CEOS Land Surface Imaging (LSI) Constellation seeks to promote the efficient, effective, and comprehensive collection, distribution, and application of space-acquired image data of the global land surface, especially to meet societal needs of the global population. A major goal of the LSI Constellation Study Team is to promote **increased cooperation among CEOS agencies in the operation of existing LSI satellite systems**. In 2007, seven CEOS member space agencies that currently operate **mid-resolution LSI systems** signed a *Declaration of Intent* stating their intentions to actively seek ways to cooperate more fully in operating their mid-resolution LSI satellite systems.

Based on input from a representative cross-section of the land remote sensing user community, the LSI Constellation Study Team created a list of recommendations for specific cooperative activities among CEOS agencies that operate mid-resolution LSI satellite systems. The recommended activities would directly benefit users of mid-resolution LSI data and through them, society in general, as they address three important areas of land remote sensing: 1) enhanced user access to data, 2) data acquisition, and 3) ground segment operations.

The LSI Constellation Study Team intends to sponsor three separate cooperative projects that will implement some of the user recommended activities. This plan generally describes cooperative activities designed to **enhance user access to mid-resolution LSI satellite data**.

**General Project Plan**

Based on input from the land remote sensing user community, users first and foremost would like to see space agencies that operate mid-resolution LSI satellite systems cooperate together to **enhance user access** to the data and products provided by those agencies. Consequently, the LSI Constellation will sponsor a cooperative project in which CEOS space agencies with mid-resolution LSI systems and data will cooperate to establish and maintain a common website designed to improve user knowledge about available mid-resolution LSI satellite data and to expedite their access to those data. The common website will provide detailed information about LSI satellite systems operated

by CEOS agencies, it will describe the characteristics of the data collected by those systems, and it will provide active links to the user interface tools by which users can search and order LSI satellite data and products, including free data sets offered by the various participating agencies. The cooperative project also will attempt to identify and implement mechanisms whereby the cooperating agencies may be able to increase the volume and expedite the access to free LSI data available to users, including offering “bundles” of mid-resolution LSI satellite data collected by different sensor systems over the same site.

Implementation of the cooperative project will proceed first with identification of the various CEOS space agencies, currently operating mid-resolution optical LSI systems, which desire to participate in the cooperative project. The participating agencies will then jointly develop a detailed project plan that will define the cooperative activities in more detail and will guide further project implementation. In addition and to the extent practical and appropriate, the LSI Constellation Study Team expects implementation of the project, including development of the detailed project plan, to be carried out in cooperation with the CEOS WGISS, WGCV, and WGEdu, as well as in cooperation with the CEOS SEO. Indeed, it is possible that one of these groups could lead project implementation.

**ANNEX 2**  
**to the**  
***Declaration of Intent by Member Agencies of CEOS for Cooperation on***  
***Mid-Resolution LSI Satellite Systems in Support of the CEOS***  
***Implementation Plan***

**A Cooperative Project Plan**  
**for**  
**Acquisition of Mid-Resolution LSI Satellite Data**

**Background**

The CEOS Land Surface Imaging (LSI) Constellation seeks to promote the efficient, effective, and comprehensive collection, distribution, and application of space-acquired image data of the global land surface, especially to meet societal needs of the global population. A major goal of the LSI Constellation Study Team is to promote **increased cooperation among CEOS agencies in the operation of existing LSI satellite systems**. In 2007, seven CEOS member space agencies that currently operate **mid-resolution LSI systems** signed a ***Declaration of Intent*** stating their intentions to actively seek ways to cooperate more fully in operating their mid-resolution LSI satellite systems.

Based on input from a representative cross-section of the land remote sensing user community, the LSI Constellation Study Team created a list of recommendations for specific cooperative activities among CEOS agencies that operate mid-resolution LSI satellite systems. The recommended activities would directly benefit users of mid-resolution LSI data and through them, society in general, as they address three important areas of land remote sensing: 1) enhanced user access to data, 2) data acquisition, and 3) ground segment operations.

The LSI Constellation Study Team intends to sponsor three separate cooperative projects that will implement some of the user recommended activities. This plan generally describes cooperative activities related to **the acquisition of mid-resolution LSI satellite data**.

**General Project Plan**

In the area of **data acquisition**, feedback from the land remote sensing user community indicates that users would like space agencies that operate mid-resolution LSI satellite systems to cooperate in establishing coordinated and complementary data acquisition strategies that would help maximize global coverage, shorten revisit cycles, increase cloud-free data over cloudy regions, and help mitigate negative impacts resulting from failure of one or more mid-resolution satellite systems. Consequently, the LSI Constellation will sponsor a cooperative project in which CEOS space agencies with mid-resolution LSI systems will attempt jointly to establish and implement complementary

data acquisition strategies that will provide users with increased volumes of more relevant data. A goal of the cooperative project will be to develop a strategy for mitigating impact on the user community in the event of failure of one or more mid-resolution LSI satellite systems. Finally, the cooperative project will attempt to define a suite of environmentally sensitive sites, geohazard sites, calibration sites, or other key sites, and it will attempt to develop a cooperative strategy for regular collection of mid-resolution LSI data over those sites using satellite systems operated by the participating agencies.

Implementation of the cooperative project will proceed first with identification of the various CEOS space agencies, currently operating mid-resolution optical LSI systems, which desire to participate in the cooperative project. The participating agencies will then jointly develop a detailed project plan that will define the cooperative activities in more detail and will guide further project implementation. In addition and to the extent practical and appropriate, the LSI Constellation Study Team expects implementation of the project, including development of the detailed project plan, to be carried out in cooperation with the CEOS WGCV, WGISS, and WGEdu, as well as in cooperation with the CEOS SEO. Indeed, it is possible that one of these groups could lead project implementation.

**ANNEX 3**  
**to the**  
***Declaration of Intent by Member Agencies of CEOS for Cooperation on***  
***Mid-Resolution LSI Satellite Systems in Support of the CEOS***  
***Implementation Plan***

**A Cooperative Project Plan**  
**for**  
**Ground Segment Operations for Mid-Resolution LSI Satellite Systems**

**Background**

The CEOS Land Surface Imaging (LSI) Constellation seeks to promote the efficient, effective, and comprehensive collection, distribution, and application of space-acquired image data of the global land surface, especially to meet societal needs of the global population. A major goal of the LSI Constellation Study Team is to promote **increased cooperation among CEOS agencies in the operation of existing LSI satellite systems**. In 2007, seven CEOS member space agencies that currently operate **mid-resolution LSI systems** signed a ***Declaration of Intent*** stating their intentions to actively seek ways to cooperate more fully in operating their mid-resolution LSI satellite systems.

Based on input from a representative cross-section of the land remote sensing user community, the LSI Constellation Study Team created a list of recommendations for specific cooperative activities among CEOS agencies that operate mid-resolution LSI satellite systems. The recommended activities would directly benefit users of mid-resolution LSI data and through them, society in general, as they address three important areas of land remote sensing: 1) enhanced user access to data, 2) data acquisition, and 3) ground segment operations.

The LSI Constellation Study Team intends to sponsor three separate cooperative projects that will implement some of the user recommended activities. This plan generally describes cooperative activities related to **ground segment operations for mid-resolution LSI satellite systems**.

**General Project Plan**

In the area of **ground segment operations**, feedback from the land remote sensing user community suggests that users would like space agencies that operate mid-resolution LSI satellite systems to provide data and products in common data formats and map projections, and with standardized metadata content. Many users also strongly desire routine access to an orthorectified image product generated from three visible and near-infrared (VNIR) bands, available from various mid-resolution LSI satellite systems. Consequently, the LSI Constellation will sponsor a cooperative project in which CEOS space agencies with mid-resolution LSI systems will attempt jointly to define and

implement common processing parameters such that they can offer users data and products that have common metadata and are delivered in standard data formats and map projections. A goal of the cooperative project also will be to develop to explore the possibility of defining and offering users an orthorectified image product as a common standard data product produced from the VNIR bands of their various mid-resolution LSI satellite systems.

Implementation of the cooperative project will proceed first with identification of the various CEOS space agencies, currently operating mid-resolution optical LSI systems, which desire to participate in the cooperative project. The participating agencies will then jointly develop a detailed project plan that will define the cooperative activities in more detail and will guide further project implementation. Particularly as relates to definition of common metadata and standard data formats and map projection, further recommendations from the user community will be invited. In addition and to the extent practical and appropriate, the LSI Constellation Study Team expects implementation of the project, including development of the detailed project plan, to be carried out in cooperation with the CEOS WGISS, WGCV, and WGEdu, as well as in cooperation with the CEOS SEO. Indeed, it is possible that one of these groups could lead project implementation.