GlobalSat under UN Framework Public-Private Partnership (PPP)

GlobalSat for Disaster Risk Reduction (DRR)

A New Global Platform To Fulfill Sustainable Development Commitments In the Post-2015 Framework

A Consolidating Role In the Implementation of Sendai Framework for DRR:

2015-2030
14-16 September 2015
Beijing, China

Milind Pimprikar, Chairman, CANEUS, mp@caneus.org
Risk Reduction Activities Thrive Through Analysis of data

Disaster Monitoring & Reduction Activities Require Data from a Suite of Sensors With Different Capabilities and With Ability to Provide Global Coverage.

No Single Satellite Can Carry Such Complete Set of Sensors
No Single Country Can Afford to Develop Such Complete Set of Sensors & Satellite Systems
The Time Has Come
To Create a Low Barrier of Entry, Common Shared Platform, That Allows Sharing of Space & Data Segments

System, Data, Solutions
To be Placed at the Service of The United Nations
To Better Fulfill their Commitments in the Post-2015 Framework For Disaster Risk Reduction
The CANEUS (CANada-EUrope-Americas-Asia-Africa) Network, founded in 1999

Serves to develop a common platform for space technology solutions

Over 15+ years, CANEUS has created PPP Consortia with Stakeholders worldwide

For Developing, Integrating and Testing Affordable Space Technology Solutions Through Sharing of Cost and Risk
CANEUS’ Consortia Success Examples

- **CSSP**: Collective Safety, Security & Prosperity using Shared Small Satellites in Africa, Middle-East, Americas, Arctic, etc.
- **SSTDM**: Small Satellites and Sensors for Disaster Management in India, etc.
- **Data**: Demonstrations and Management in Africa, Asia, Oceania regions
- **FBW**: Fly-by-Wireless for Sustainment and New Aerospace Systems
- **MNT**: Micro-Nanotechnology for Aerospace and Energy Applications
- **CoE**: Centre for Excellence in Nanotechnology, Energy
- **NAVIN**: Nano Materials and Sensors for Aerospace Vehicles
CANEUS Workshop
New Global Framework for Sharing of Space Technology and Data Standards
To Serve Nation’s Disaster Management Needs.

Proposed UN GlobalSat,
For commitment to the post-2015 framework for disaster risk reduction
To create proposed UN GlobalSat, that allows sharing of space and data segments with its ability to serve as a strong tool for nation’s disaster management and development needs

Welcome to CANEUS World Workshop 2015

The workshop attempts to define technical, policy, financial issues, and a framework partnership implementation plan for the CANEUS led UN GlobalSat constellation contributing to the post-2015 framework for disaster risk reduction.

The UN GlobalSat is an opportunity for constructive engagement in space technology with nations worldwide that will increase partner’s capacity tailored to specific disaster management requirements.

In Focus

- End-User Updates
- Satellite Applications
- Programmatic Issues
- Collaboration Models

Blogs

- Partners
- Stakeholders
- UN
New Global Framework
for Sharing of Space Technology
and Data Standards
To serve Nation’s
Disaster Management Needs

CANEUS WORKSHOP
THIRD UN WORLD CONFERENCE ON DISASTER RISK REDUCTION
Sendai-Japan
March 17th, 2015, 9:00 – 12:00

Concept of UN Global-Sat For commitment to the post-2015 framework for disaster risk reduction
GlobalSat for DRR:  
- Opportunity and Implementation Path Forward

**Opportunity:**
- No global partnership to coordinate and organize all the disparate efforts for disaster and environmental monitoring through satellites
- Unique Opportunity Under UN Framework to address:
  - Data availability
  - End-to-end data flow: System of Systems
  - Near real-time Disaster alerts

**Implementation Path:**
- Formulate Global Collaborative Partnership
- Seeking Guidance and Feedback to Realize the UN Vision
GlobalSat PPP Concept

- Common nano-satellite platform allows:
  - Data gathering system with the same telemetry and commanding
  - Production in numbers that decreases overall cost and increases predictability of performance
  - Common ground segment
  - Common launch interface and deployment system
  - Design tailored to specific requirements for reliability and mission duration
  - Availability of spares across all participants
  - Inter-satellite communication system

- Payloads built all over the world and dedicated to gather data:
  - Infrared
  - Visible
  - Panchromatic
  - Ground sensors data collection
  - Synthetic Aperture Radar
  - Etc…

- Platform / Payload Integration can be done in states that build the payloads
  - Secondary benefits for local economy

- All data collected and available / distributed both raw and post-processed to the participating countries
  - Leverage on each other

**AFFORDABLE**

**ADAPTABLE**

**SUSTAINABLE**

**SCALABLE**
**GlobalSat Platform Under UN Framework**

- Complements and different from existing efforts

- **GlobalSat**: A constellation of diverse instruments (hyperspectral, IR, SAR, etc..) and ability to do data exfiltration from sensors on the ground

- **GlobalSat solution** is part technical product and part educational and empowerment
  - *Focus is on capacity building*

- GlobalSat shall assimilate information of other space assets to enhance data processing and interpretation
  - e.g. Leverage on recent agreement between UNOOSA and DigitalGlobe

- GlobalSat puts the local entities in the driving seat and empower them into a self-sustainable system for them to manage.
- Current solutions usually put private companies on the driving seat.
GlobalSat Implementation Issues

Technical
- Suite of sensors and satellite system
- Common data and access
- Affordable
- Sustainable
- Adaptable
- Scalable
  - Expansion to sustain growing need and achieve global coverage (space and time)

Programmatic
- **Accessibility:**
  - low barrier of entry
- **Accountability:** to Serve Global Communities
- **Program Management:** Lean Effective Leadership
- **Resources:** Accomplish GlobalSat Vision
- **Job Creation:** In Global Communities
- **Educational Imperative**
GlobalSat Implementation Steps:

• **Primary Objective**: Seek Stakeholder’s Perspectives

• **Potential Models for Resources**:
  - Participating Countries Pool-in resources to address Application-Specific goals
  - Key Challenge: Potential Bureaucratic delays
  - **Public-Private Partnership (PPP) Model**:
    - Proven and Successful in Similar Endeavors
      - Large pool of pro-active foundations, & Individual

• **Balancing the needs and challenges**
  - Identify the Scope, limitations and complimentary features
  - Clearly Articulate the broad programmatic issues

Primary Goal: Address end-users Needs and requirements
Potential PPP Financial Framework

“Spending on disaster management is an investment, not a risk. As such we should strive for the best ROI for each investor”
PPP Session expectations

Seeking input from participants:

• What changes are needed to this PPP concept to address the global framework needs?

• Which are the first countries / regions for PPP?

• Who are the main PPP stakeholders to include in the formulation phase?

• Which are the best financial mechanisms to consider?
Thank You