



Stabilization & Reconstruction Status Briefing: Creating a Civil- Military Collaborative Information Environment

Larry Wentz

National Defense University

Center for Technology and National Security Policy

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Outline



- Potential global participants
- Challenges
- “Baseline current capabilities”
- Gaps
- Strawman



Potential Global S&R Participants



- **International Organizations (IO)**
 - ICRC, IFRC,..
- **Intergovernmental Organizations (IGO)**
 - IOM, EU, OSCE,..
- **United Nations (UN)**
 - OCHA, UNDPKO, UNHCR,...
- **Non-governmental Organizations (Hundreds of small to large NGO)**
 - CARE, World Vision, MSF, OXFAM, Mercy Corps,....
- **Civilian Governmental Agencies**
 - US [DoS (S/CRS, PRM, HIU,..), USAID/OFDA/DART, USDA, DoJ,..]
 - UK DFID
- **Military**
 - US Military Forces
 - US Defense (DISA,...) and Intelligence Agencies (NGA,...)
 - NATO (SHAPE, member nations, PfP nations, Civil Emergency Planning)
 - Non-NATO National Military Forces
- **For Profit Businesses**
 - KBR, BDM, LHM, MPRI,....



S&R Comms and IT Challenges



- **Availability of reliable communications and IT (Austere environment)**
 - Physical, environmental, administrative, and operational vulnerabilities
- **Ad hoc, stove-piped implementation and operation the norm**
 - No CONOPs, doctrine and formal mechanism to coordinate planning and implementation
 - Lack standardization of capabilities and procedures
 - Voice and IT Network and System Administration (including Directories) and O/M
 - Spectrum management
- **Coverage, Robustness, and Performance**
 - World wide and short and long range capabilities
 - Works well under “all circumstances” inside and outside buildings
 - Field HQs versus remote sites versus host nation leaders and population
 - Quality of Service, ease of use and user training
 - Sources and quality and relevance of information (Information Management and Assurance0
 - Power (Power Supplies, Local, Transportable, Car Battery, Rechargeable Batteries)
- **Costs (Purchase and Operational) and Funding**
- **Decision aids and collaboration tools**
- **Organization culture**
 - IO/IGO/NGO impartiality sensitivities
 - Military security and release restrictions

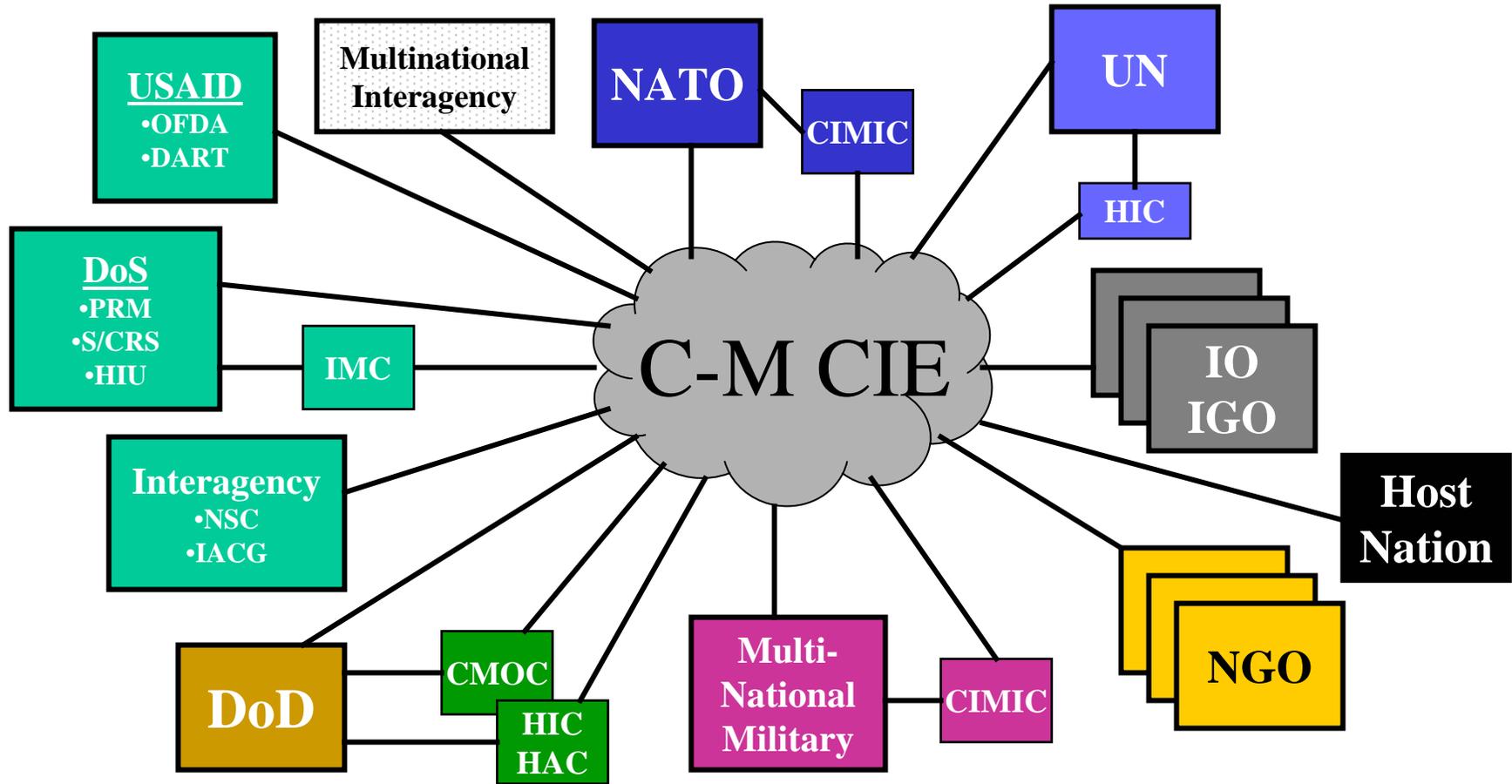


Fielded Capabilities

- Commercial Non-military
 - Voice, Fax and Data Capabilities
 - Public Telephone Switched Network (PTSN) up to 56 Kb/s
 - Cellular phone (GSM) about 2.4 Kb/s
 - Satellite equipment
 - Phones
 - » Iridium, Thuraya, Inmarsat, ... 2.4 to 64 Kb/s
 - » Inmarsat RBGAN about 144 Kb/s
 - VSAT: 64 Kb/s to 8 Mb/s
 - Internet access (dial-up ISP, leased satellite connectivity to Teleport)
 - Fixed and wireless LANs with laptops and workstations
 - VHF and HF radio
 - Fixed and wireless phones (PABX, VoIP)
 - Microsoft Office, GIS,..
 - VTC (if possible and not too expensive)
 - GPS (expanding use)
- Purpose-build Secure Military Systems plus Commercial



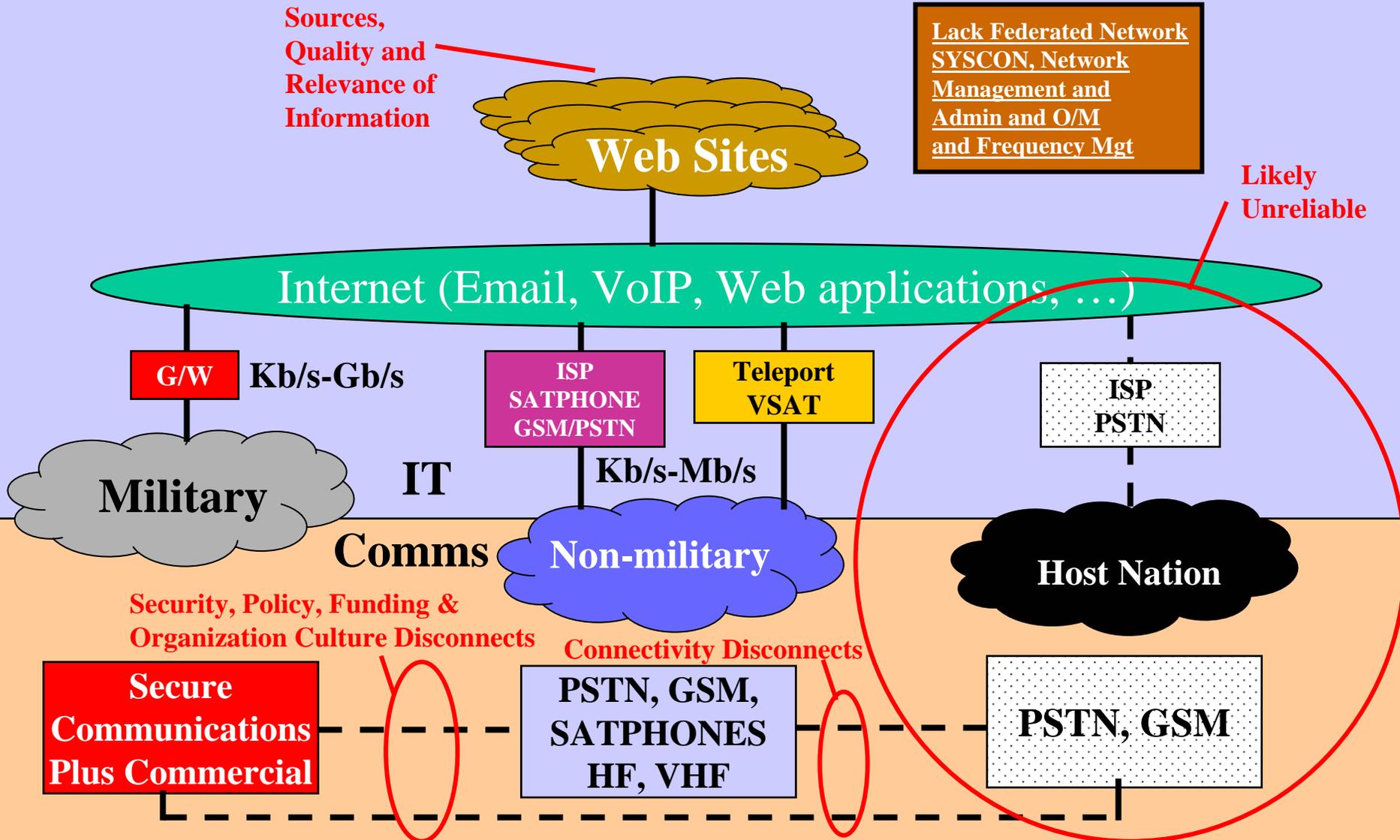
S&R Ops Civil-Military Collaboration and Information Sharing



**Challenge: Participant Communications and Information Systems Capabilities
Range from Face-to-Face to State-of-the-Art Communications and Information Technology**



De facto S&R Communications and IT Architecture





"Baseline" S&R

Communications and IT Capabilities



HIU eRoom/NGA GIS

Afghanistan stabilization

AIMS/ReliefWeb

Internet (Email, VoIP, Web applications, ...)

NIPRNET

VSAT
INMARSAT
Iridium
THURAYA
MPDS
RBGAN
GSM
PSTN
HF
VHF
UHF
GPS
VTC/Video
GIS
IWS
Digital Camera

SIPRNET

CENTRIXS

MCFL, CNFC,
ISAF, GCTF, 4 Eyes

JWICS

Military

Teleport/ISP

VSAT
INMARSAT
Iridium
THURAYA
MPDS
RBGAN
GSM
PSTN

USAID/OFDA/DART
Interagency

HF
VHF
UHF
GPS
VTC/Video
GIS
Digital Camera

Non-Military

Teleport/ISP

VSAT
INMARSAT
THURAYA
GSM
PSTN

United Nations

HF
VHF
Wireless LANs
VoIP
PABX
GPS
VTC
GIS
Groove

Teleport/ISP

INMARSAT
THURAYA
GSM
PSTN

IO, IGO, NGOs

Pencil/Paper
HF
VHF
VSAT
GPS
Wireless LANs
VoIP
VTC/Video
LMR
Groove

Host Nation

ISP
GSM
PSTN

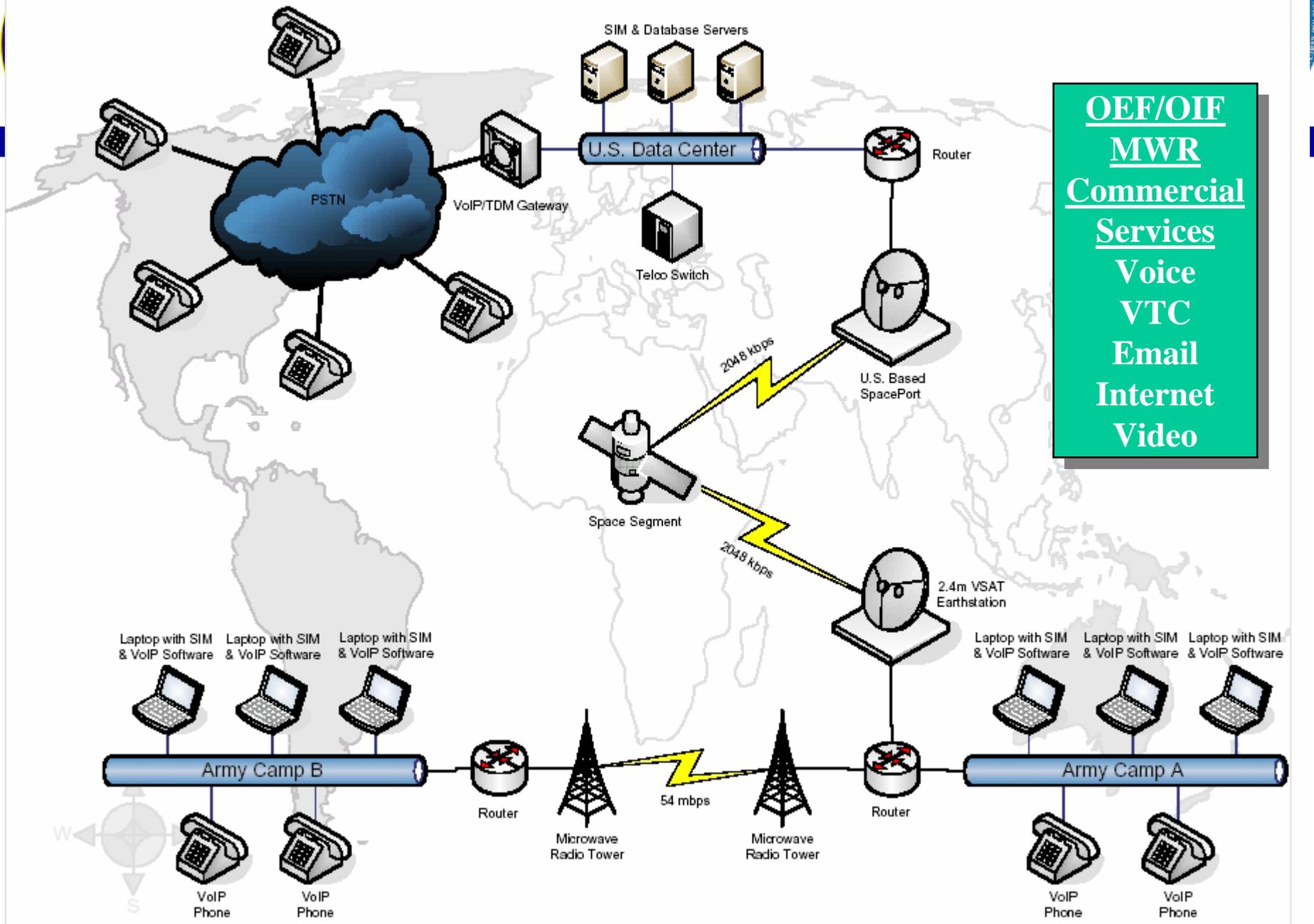


Example Communications and IT



	Military	Civilian Gov't (US)	UN	IO/IGO	NGO	Host Nation
Apps	Web- Site Microsoft GIS IWS Secure VTC GPS	Web- Site Microsoft GIS <i>IWS/Groove</i> VTC GPS	Web-Site Microsoft GIS Groove VTC GPS	Web-Site Microsoft GIS <i>Groove</i> GPS	Web-Site Microsoft <i>Groove</i> VTC <i>GPS (some)</i>	
IT	Internet (Kb/s-Gb/s) Laptops/WS JWICS (TS) SIPRNET (S)	Internet (Kb/s- Mb/s) Laptops/WS SIPRNET (S)	Internet (Kb/s-Mb/s) Laptops/WS Wireless LANs	Internet (Kb/s-Mb/s) Laptops/WS	Internet (Kb/s) Laptops <i>Wireless LANs</i> <i>VoIP</i>	<i>ISP</i>
Comms	<i>PSTN</i> GSM MILSAT/SATPHO NE/VSAT Radios NSA Secure	<i>PSTN</i> GSM SATPHONE VSAT Radios NSA Secure	<i>PSTN</i> GSM SATPHONE VSAT Radios Commercial Secure	<i>PSTN</i> GSM SATPHONE Radios	<i>PSTN</i> GSM SATPHONE	<i>PSTN</i> <i>GSM Network</i> <i>Radios</i>

Freedom Calls Foundation
Network Diagram



OEF/OIF
MWR
Commercial
Services
Voice
VTC
Email
Internet
Video



NGO Mobile Communications Box (Voice/Data)



NetReliefKit Project

Basic Cisco configuration

- Mobile wireless router
- Wireless base station
- IP phones



Target Microsoft applications

- Relief logistics
- Refugee rehabilitation
- Disease assessment

Inmarsat contribution

- Integrated RBGAN for satellite based Internet access



Key Activities

- Establish responsibilities, deliverables, project timeline
- Establish pricing and custom manufacturing process
- Identify cube server provider



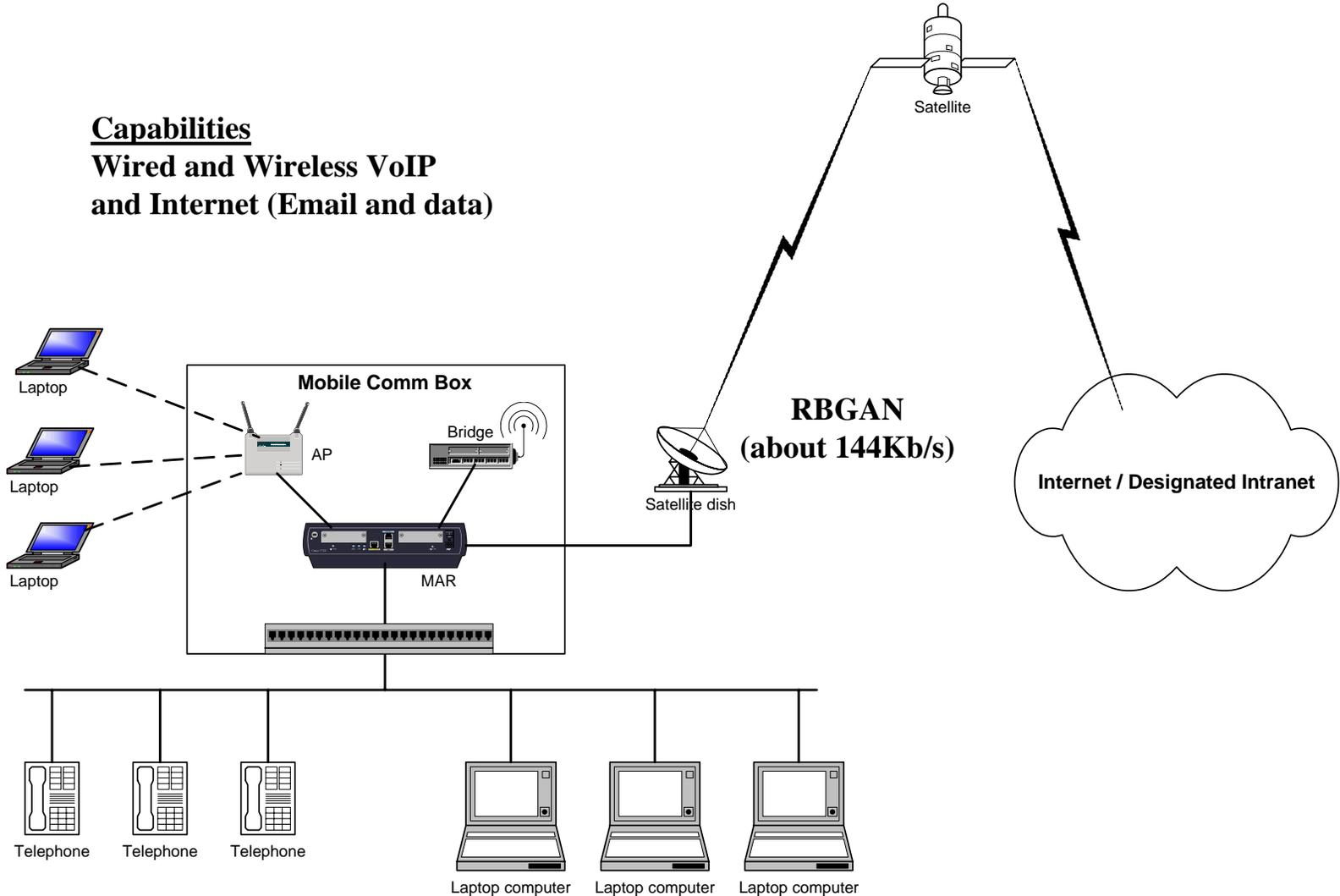
- Identify NetHope members to trial prototypes
- Set up custom manufacturing
- Identify sponsors (if reqd) for provision of kits to NetHope members



NGO: MCB Architecture

Capabilities

**Wired and Wireless VoIP
and Internet (Email and data)**





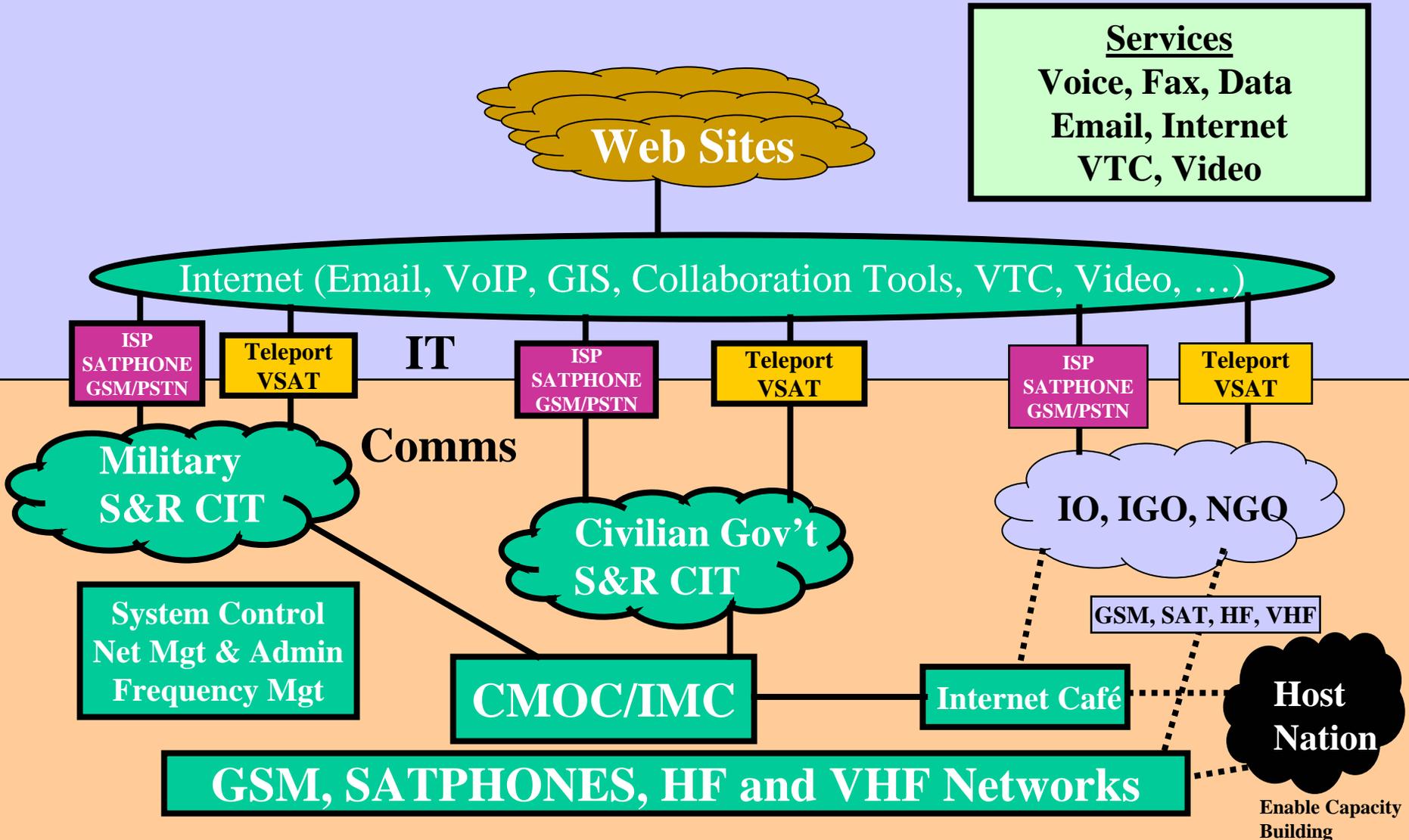
S&R C-M CIE Gaps



- Agreed System-of Systems Architecture
- Strategy, CONOPS and Framework for Planning, Implementing and Operating a Federated Network (Organize, Train and Equip)
- SYSCON, Network Management and Admin, O/M, and Spectrum Mgt
- Robustness (Coverage and Performance)
- Standards, Protocols and Procedures
- Information Classification and Release
- Information Management and Assurance
- Decision aids and collaboration tools
- Education and training
- Costs (Satellite use) and Funding
- Responsible organization arrangement with authority and resources



Strawman S&R Communications and IT Architecture





Back Up



Strawman S&R Communications and IT Architecture

