Internetworking Subsystem

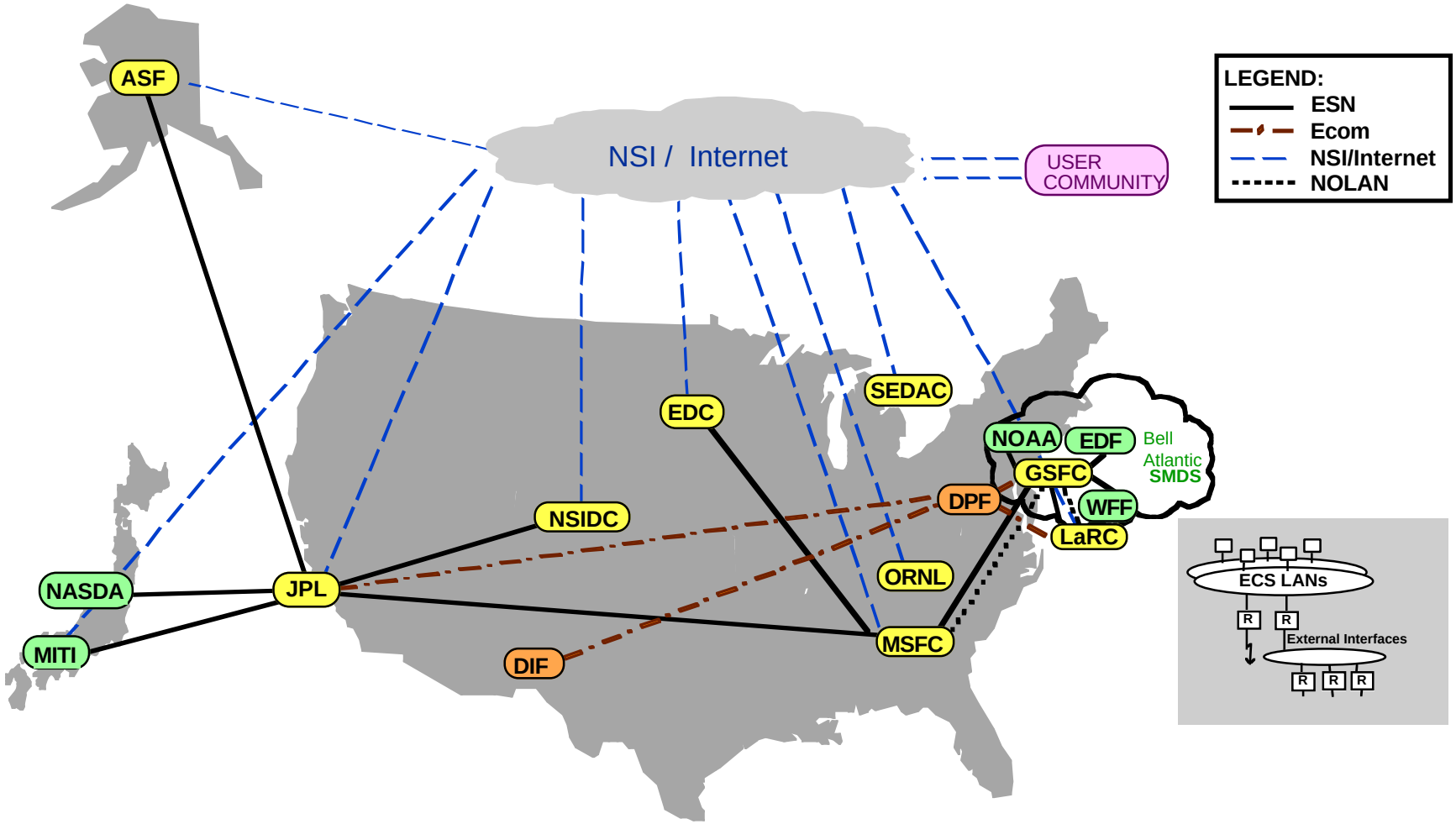
Mary Armstrong

17 January 1995

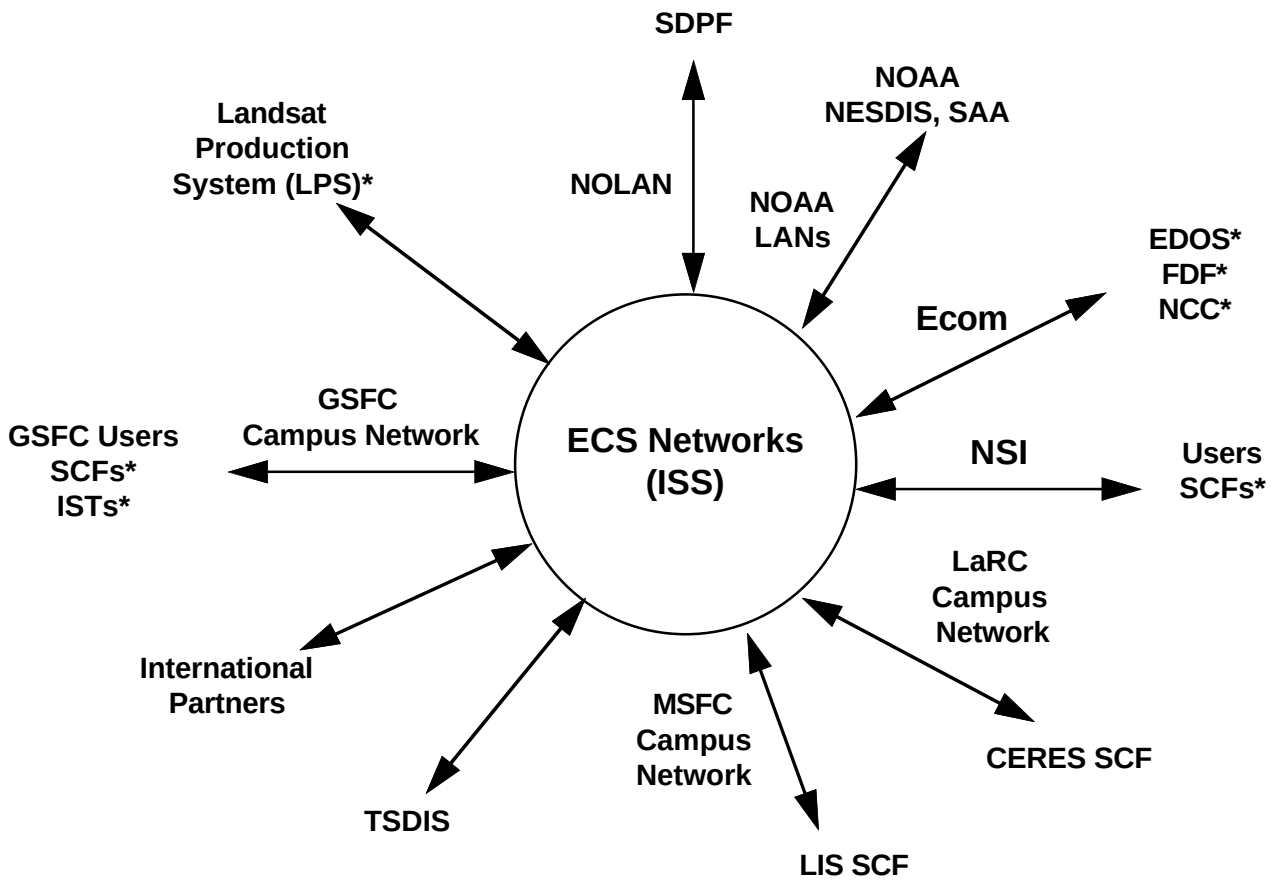
ISS PDR Roadmap

ISS Overview	**Mary Armstrong**
WAN Sizing	**Sid Ambardar**
• **ESN Sizing**	
• **DAAC Outputs to NSI**	
• **Media vs. ESN WAN Trade**	
FOS Networking Support	**Dean Moore**
• **EOC LAN**	
• **IST Support**	
DAAC LANs (IR-1 only)	**Ezra Jalleta**
SMC LAN	**Ezra Jalleta**
Migration to High Speed Networks	**Ezra Jalleta**
ISS Summary	**Mary Armstrong**

ECS Networks Context



ISS Interfaces at Release A



Early interface testing only

Release A Design Drivers

NETWORK	DESIGN DRIVERS
ESN WAN	TRMM Flows, Existing V0 Traffic, RMA
EOC LAN	Real-Time Telemetry Processing, Performance, RMA, Security
DAAC LANs	TRMM Interfaces, Scalability (to Release B & beyond), Processing I/O, Data Server Subsystem Performance & RMA
SMC LAN	Scalability (to Release B & beyond) RMA, Security

Internetworking Technologies

OSI Layer	Release A
Transport	TCP UDP
Network	IP ICMP IGMP ARP/RARP RIP OSPF

Internetworking Technologies

OSI Layer	Release A
Data Link	Ethernet FDDI HiPPI SMDS PPP
Physical	Twisted Pair Fiber

ISS Summary

- ESN Release A needs will be met with minor upgrades to the V0 Network.
- Mitigation strategies, including use of subsetting and use of media, have been analyzed; further analysis of subsetting impacts is needed.
- EOC Network design, using dual FDDI rings, will accommodate AM-1 and later missions.
- DAAC LANs for IR-1 will use existing V0 LANs; this will provide the best cutover support through Release A integration and test.
- The SMC will be implemented with FDDI to accommodate Release B sizing requirements.
- CSMS has considered strategies for migration to high speed networks and is prototyping use of high speed technologies.