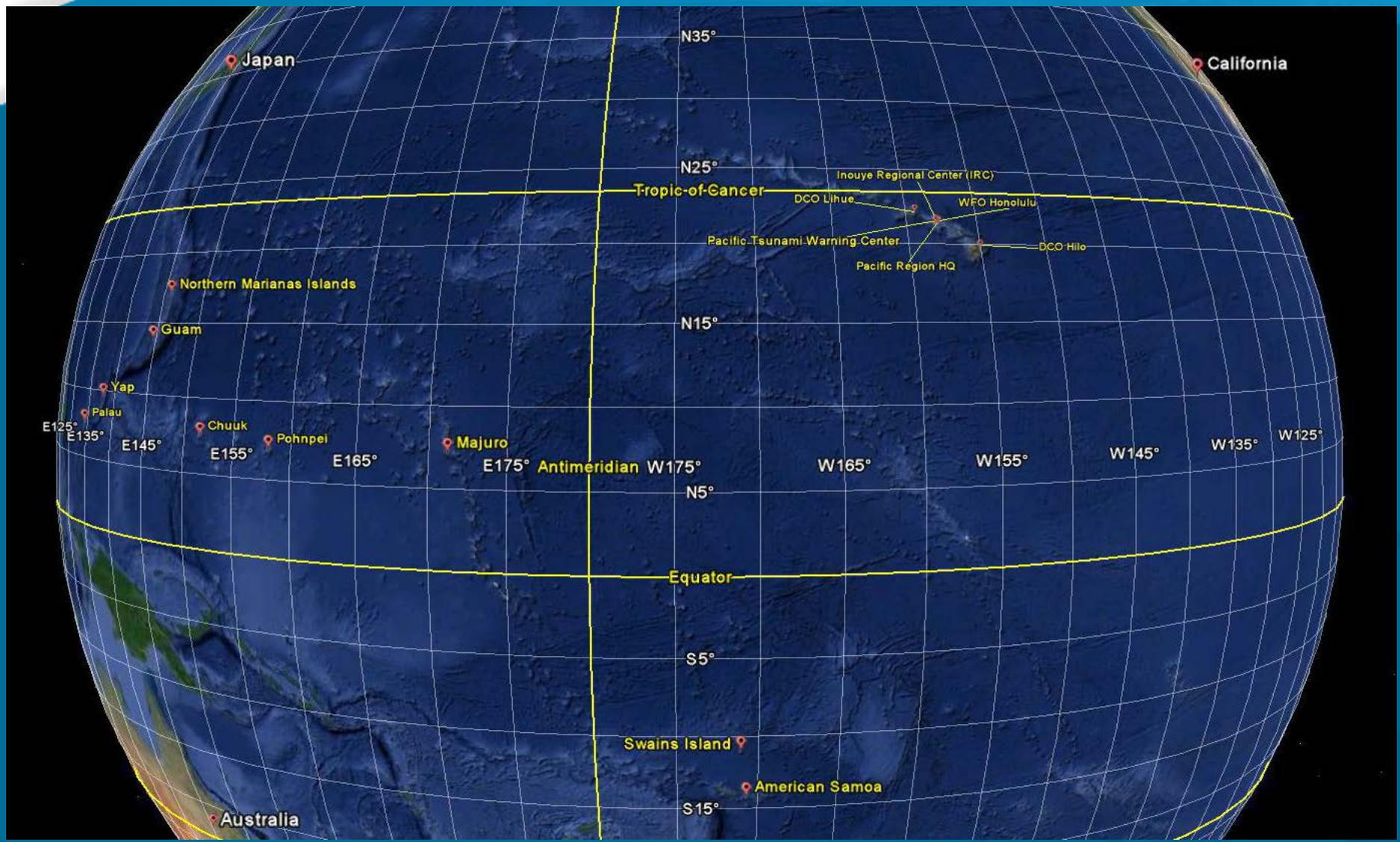


Pacific Region Satellite Ground Stations

Satellite Reception and Communications within Pacific Region
Current state and Future Plans

Eric Lau
Pacific Region HQ

Pacific Region NWS



Satellite Farm at Pacific Tsunami Warning Center (PTWC)



Satellite Dish

NOAA Weather Wire Service

OPSnet VSAT

EMWIN

MTSAT/SPARE

GOES

IRIS VSAT

NOAAPORT SBN

HRPT – Polar Tracking

- Diameter

– 14 feet

– 4 feet

– 5 feet

– 15 feet

– 12 feet

– 15 feet

– 24 feet

– 5 feet in Radome

Honolulu Community College

Orbital Systems

2.4 meter X/L band Polar Tracking

Suomi NPP VIIRS

Aqua

Terra

NOAA POES

METOP

Feng Yun



Data Transport -- Island of Oahu

National Weather Service Pacific Region satellite feed are located on the south side of the Island of Oahu, Hawaii. The Pacific Tsunami Warning Center (PTWC) houses the AWIPS SBN antenna and the AWIPS communications processors (CPSBN) for each office are located. Also, the supplemental satellite data from GOES, MTSAT and HRPT.



Dedicated Point-to-Point T-1 lines connecting each office with AWIPS from PTWC.

- (2) T1 to WFO Honolulu
- (2) T1 to Pacific Region HQ
- (1) T1 to WFO Guam. **

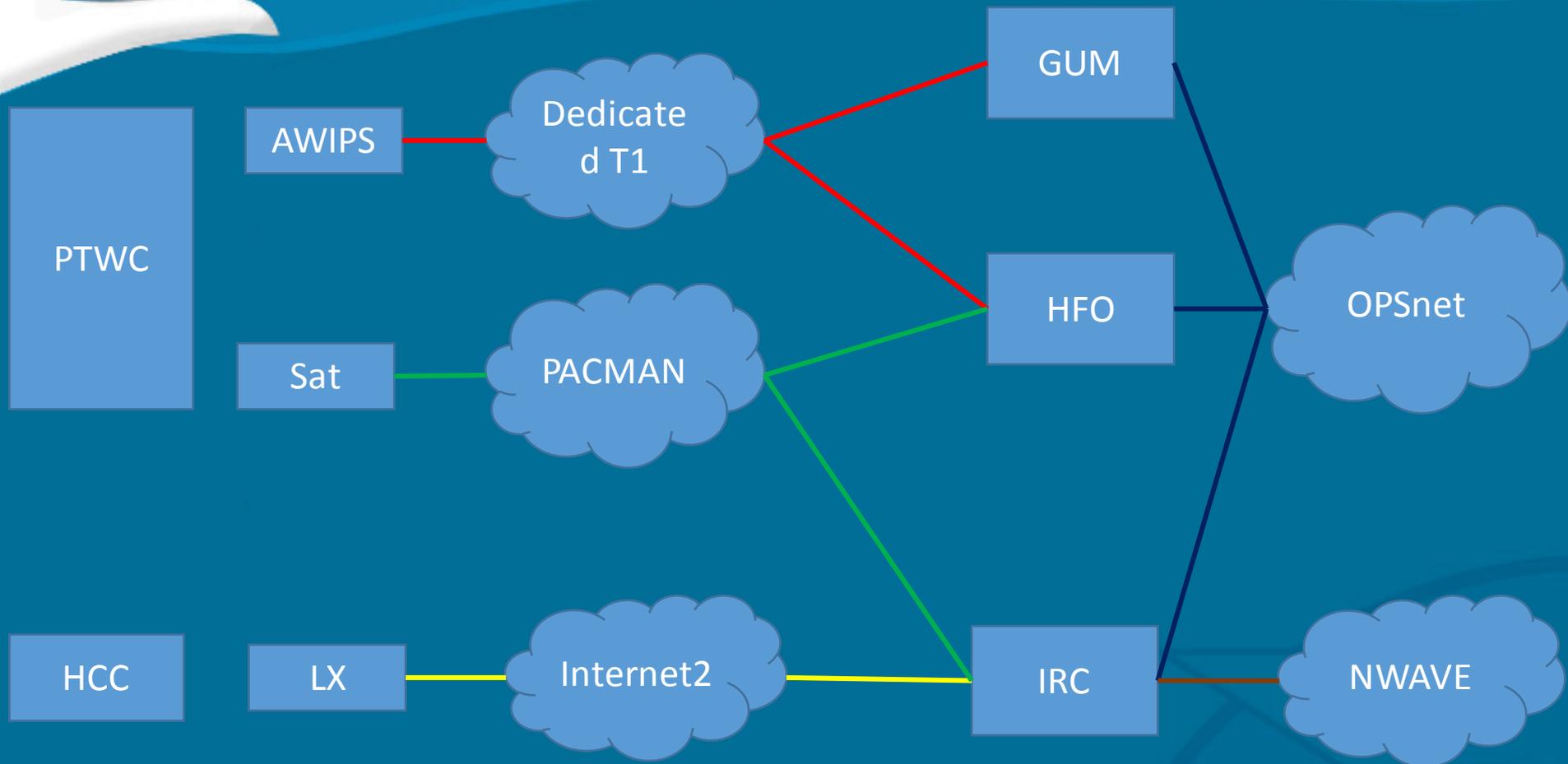
** Note that only **one (1)** T1 feeds the AWIPS for WFO Guam, which is nearly 4000 miles from the PTWC.

Pacific Region Metropolitan Area Network (PACMAN)

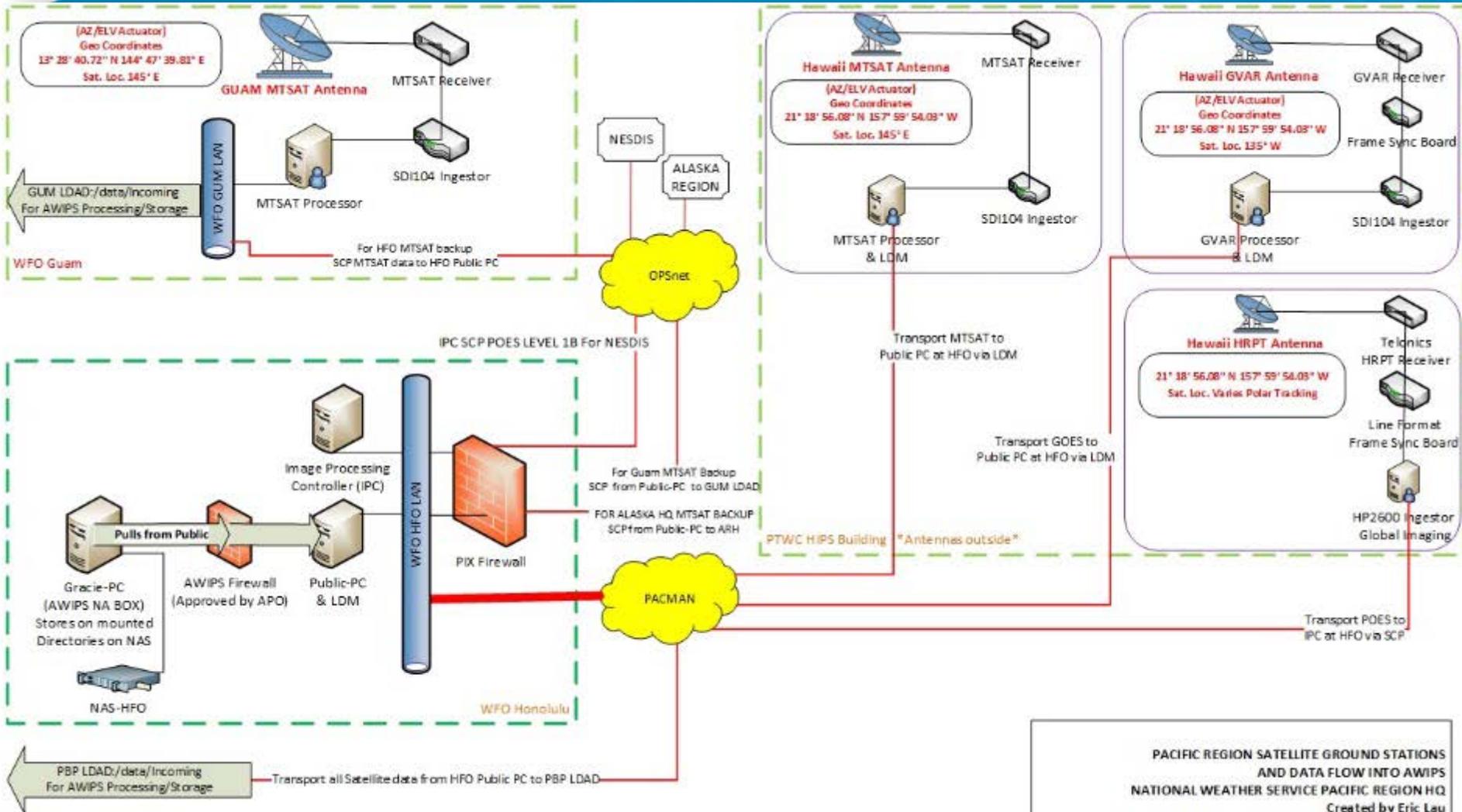
- GOES/MTSAT/HRPT is received, processed and sent via PACMAN to HFO and PRH.
- 10 Mbps links.

WFO Guam and WFO Honolulu share MTSAT data to each other for high availability of satellite data.

Pacific Region Satellite Comms



Satellite Data Flow



PACIFIC REGION SATELLITE GROUND STATIONS AND DATA FLOW INTO AWIPS NATIONAL WEATHER SERVICE PACIFIC REGION HQ
Created by Eric Lau
October 7, 2013

Daniel K. Inouye Regional Center (IRC)



- NWS Integrated Dissemination Program – Ground Readiness Project
- Working with NWS IDP-GRP on the future of satellite reception and capabilities.
- Himawari CTS and GOES-R GRB will be installed on the roof of IRC depending on the national schedule.
- LX Band Polar Orbiting receive station will also be installed a top IRC, but it will require modifications to the building due to structural integrity.

Conclusion

- Operations for satellite ground stations will transition to IRC when hardware specifications are available and procured by the GRP.
 - GRP to fund and install new satellite receive station for Himawari (~January-March 2015)
 - GRP to fund and install new satellite receive station for GOES-R
- IDP to drastically increase bandwidth for OCONUS. “Build it big with options to go bigger”
- AWIPS SBN successfully installed at IRC May 2014.
- Initial thoughts and questions?

Thank You.