



Loea Communications Overview

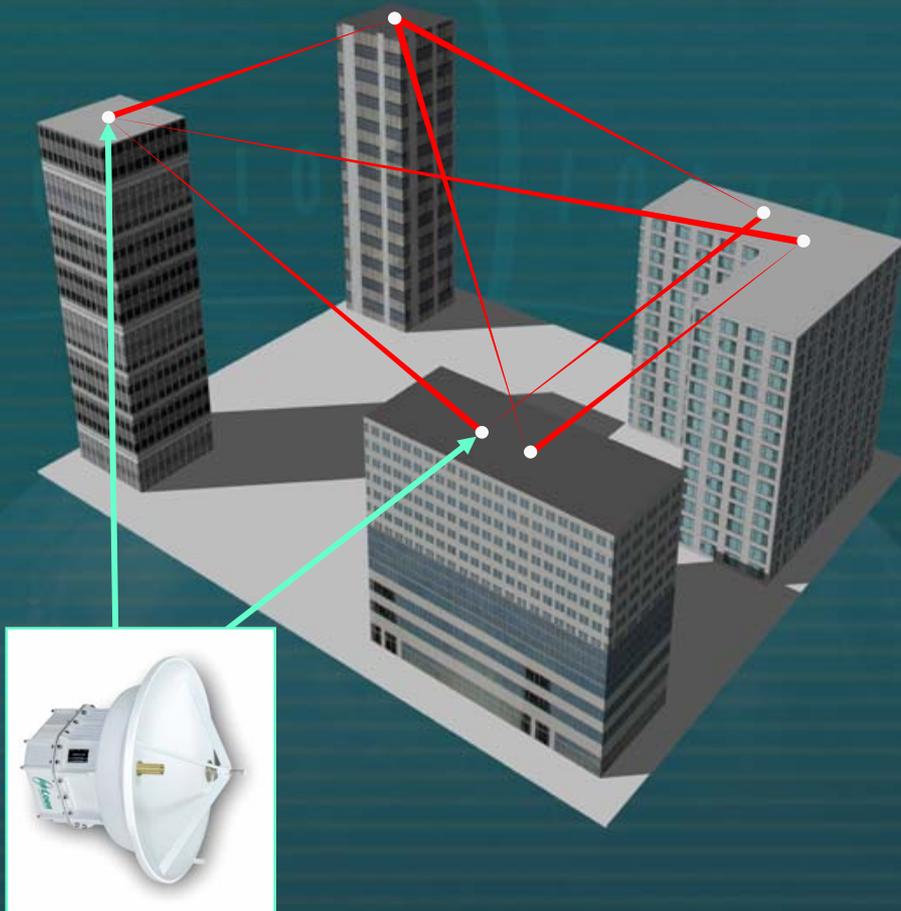
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Virtual Fiber !

Loea's Point-to-Point Virtual Fiber



- **10 GHz of spectrum at 71-76 & 81-86 GHz. Only spectrum available where multi gigabit communication speeds are possible.**
- **Very high speed with 1.25 Gbps now, 2.5 Gbps next year and 10 Gbps in two years**
- **Inexpensive**
- **Rapidly deployable (within hours)**
- **Telecommunication-grade reliability**
- **Pencil beams of less than one degree. So, there is no scarcity of spectrum and many links are possible within a geographic area.**



Applications That Will Benefit From A Last Mile Solution

- **Access Diversity**
 - Redundancy
 - Disaster Recovery

- **Fiber Extension**
 - Access
 - Local Area Networks
 - Storage Area Networking

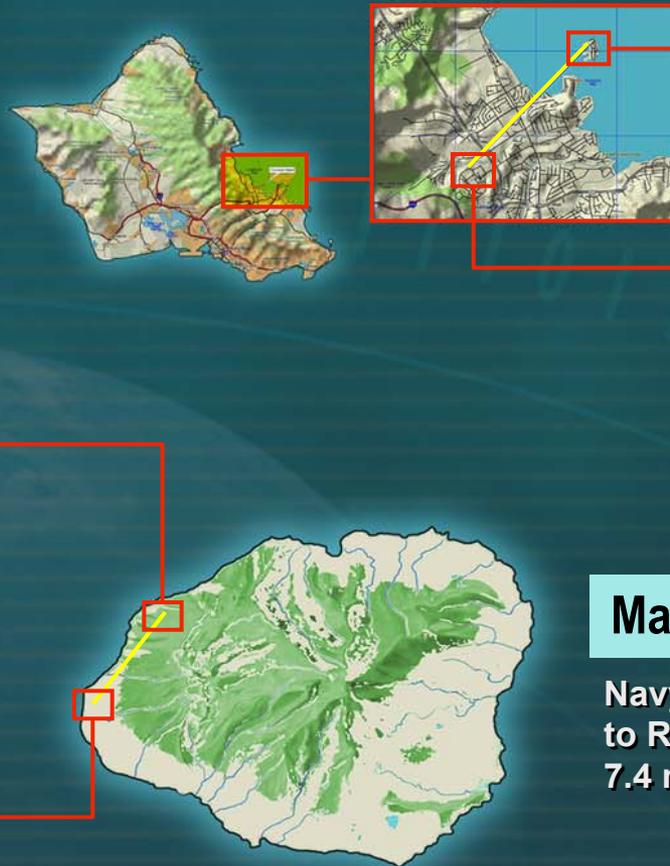
- **Wireless Backhaul**
 - Cell Towers
 - Wi-Fi hot spots



Initial Field Tests (Hawaii)

Coconut Island, off Oahu

UH School of Oceanography:
Coconut Island to Oahu –
2.7 miles (August 2002)



Makaha Ridge on Kauai

Navy Pacific Missile Range Facility
to Radar Site on Makaha Ridge –
7.4 miles



Coast Guard ESU, June 2003 (Honolulu)

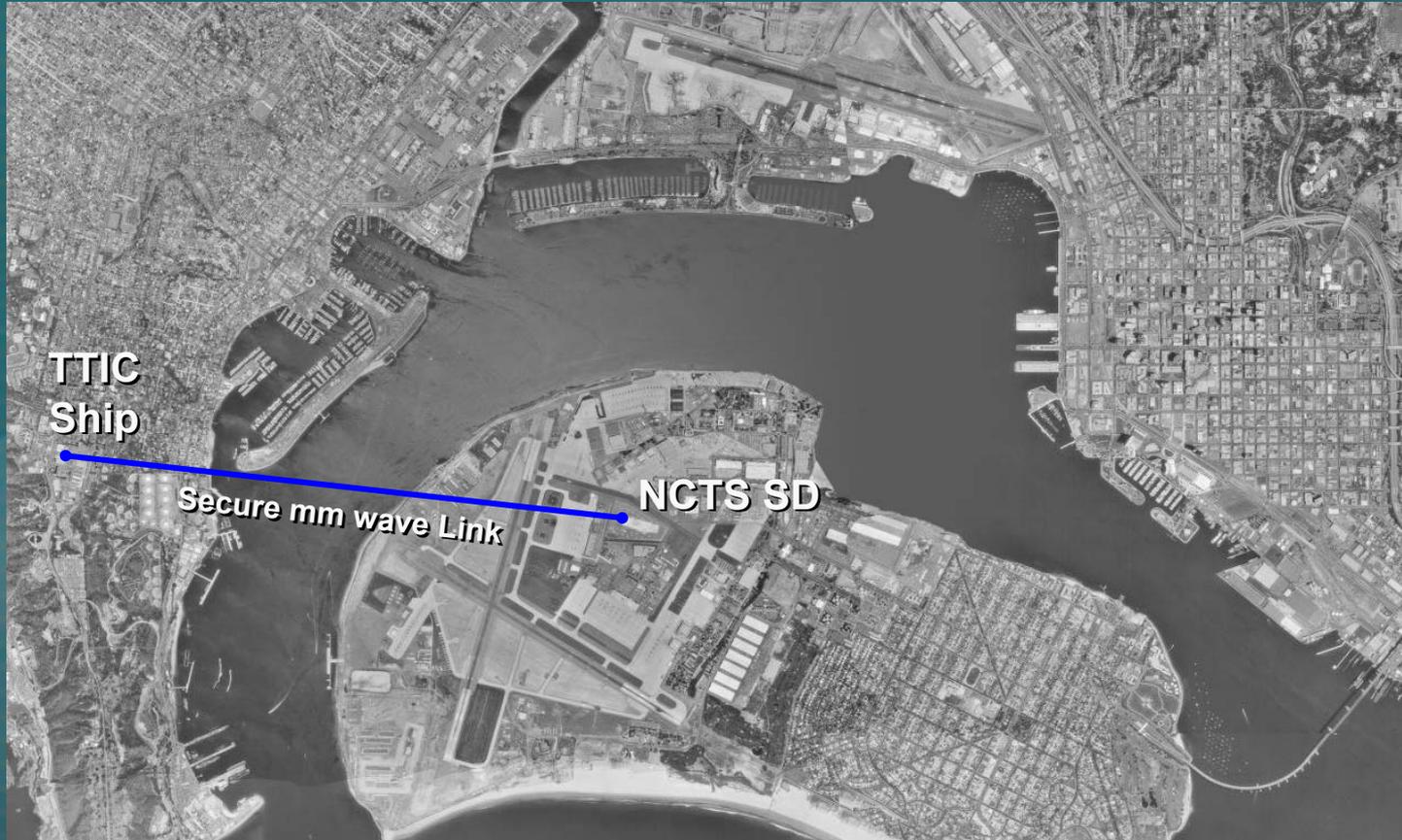


Navy Installation, August 2003 (Pearl Harbor)





SPAWAR North Island to Point Loma, August 2003 (San Diego, CA)



NIMA Installation (Washington, DC)



New York / New Jersey Links



Roof rights are not required (and typically landlord approval is not needed) !



Loea Transceiver at 55 Broad Street, New York



Super Bowl XXXVII Proves Application for Streaming HDTV



Demonstrated wireless transmission of uncompressed HDTV at 1.485 Gbps in compliance with ANSI/SMPTE standard 292M-1998. Two links were deployed for redundancy.



ABC Super Bowl XXXVII - Streaming HDTV

- **HDTV Camera on a hill overlooking Qualcomm Stadium**
- **Two Loea virtual fiber links spaced 10 yards apart**
- **HDTV Camera $>.05$ miles from ABC production van**
- **1.485 Gbps transmission rate – “world’s first”**
- **ANSI/SMPTE 292m-1998 standard**
- **Streaming without compression (coding or decoding)**

