

PMRF Aerial Fiber Project



19 MAY 2011

Project Team



- **PMRF**
- **Manu Kai**
- **KIUC**
- **Telecable Systems Inc.**
- **Exsell Sales Associates**

Agenda



- **Project History**
- **Aerial Fiber Route**
- **Installation**

Project History



- 1994 – Requirement established for fiber connection to PMRF remote sites
- 1995 – Engineering studies began
 - Aerial route not considered
 - ✦ Pathway privately owned and in poor shape (Kekaha plantation)
 - ✦ Remainder of route owned by Kaua'i Electric (KE)
- 1996 – Engineering studies completed
 - Directional boring and undersea method recommended
- 1999 – Kaua'i Island Utility Cooperative (KIUC) is established and acquires KE assets
- 2000 – Kekaha plantation closes, KIUC assumes custody of electric lines
- 2000 – Subsequent study of sea floor area determines directional boring not practical
 - Vertical-to-horizontal boring ratio not satisfactory
 - 1200 feet vertical and 5200 feet horizontal required to get below sea bed wave action

Project History (continued)



- 2004 – Aerial fiber route re-evaluated as most practical and cost-effective
 - Pathway solely owned by KIUC and in better shape
- 2005 – Technical solution and ROM developed through partnership with Exsell Sales and Chenga Corporation
- 2006 – PMRF briefs KIUC on proposed project and receives favorable consideration
- 2007 – \$\$ programmed for FY08 by Missile Defense Agency (MDA)
- 2008 – Phase 1, Engineering and Build of Materials completed
- 2009 – Phase 2, Materials procurement completed
- 2011 – Phase 3, Installation completed

Aerial Fiber Route



• Aerial Fiber facts

- 139,564 feet of cable
 - ✦ 26.4 Miles (42.5 Km)
- Approximately 3850 feet in underground conduit and 135,714 feet aerial
 - ✦ 400+ KIUC poles
- Actual fiber distance is approximately 142,800 feet
 - ✦ 27 Miles (43.5 Km)

Koke'e Aerial-to-Underground



Makaha Ridge Aerial-to-Underground



Koke'e Road



Koke'e Road



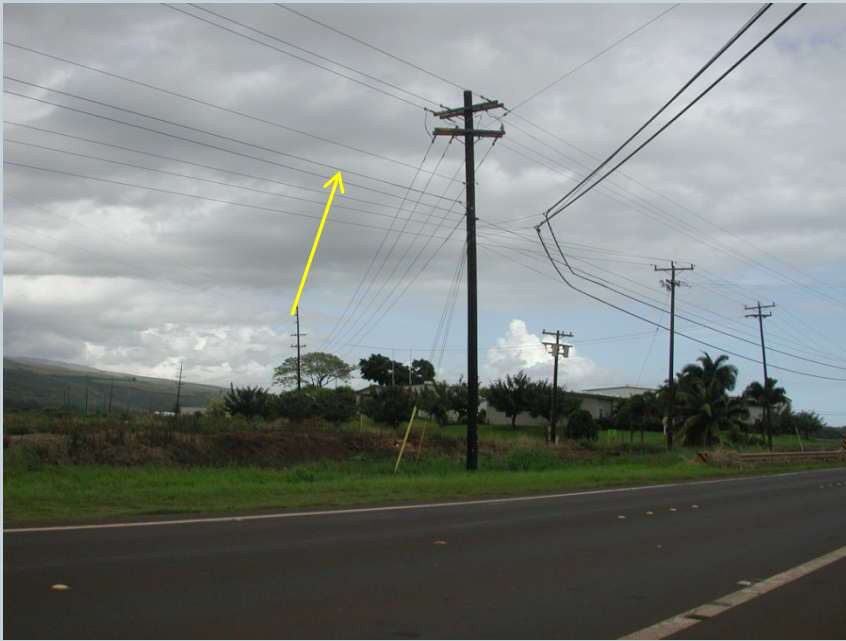
Kekaha Plantation



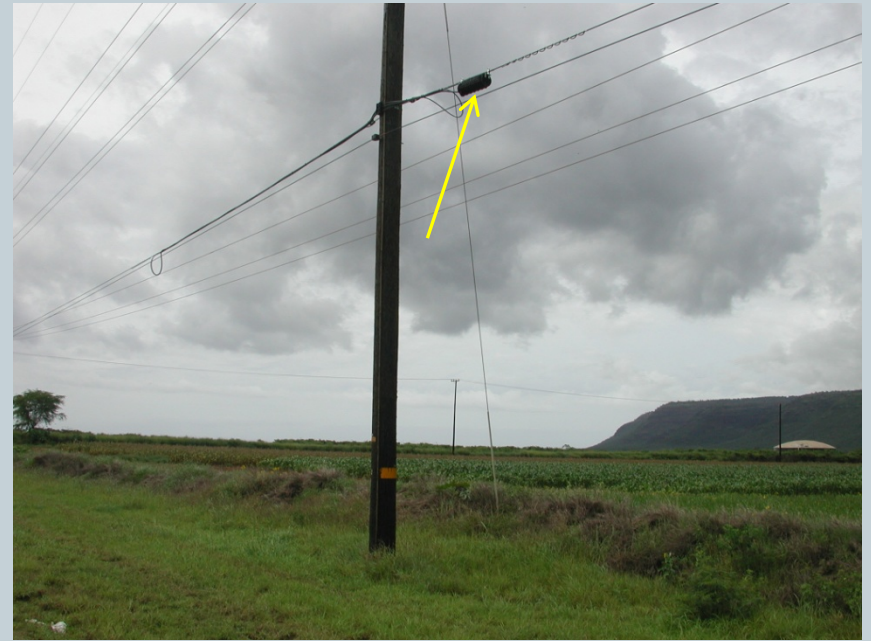
Kekaha Housing



Pioneer



Mana Stretch



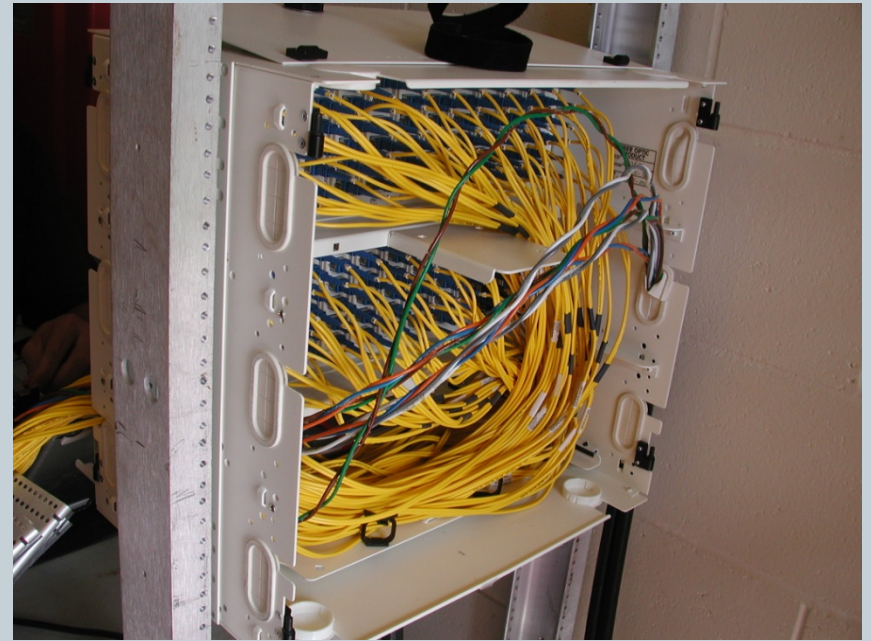
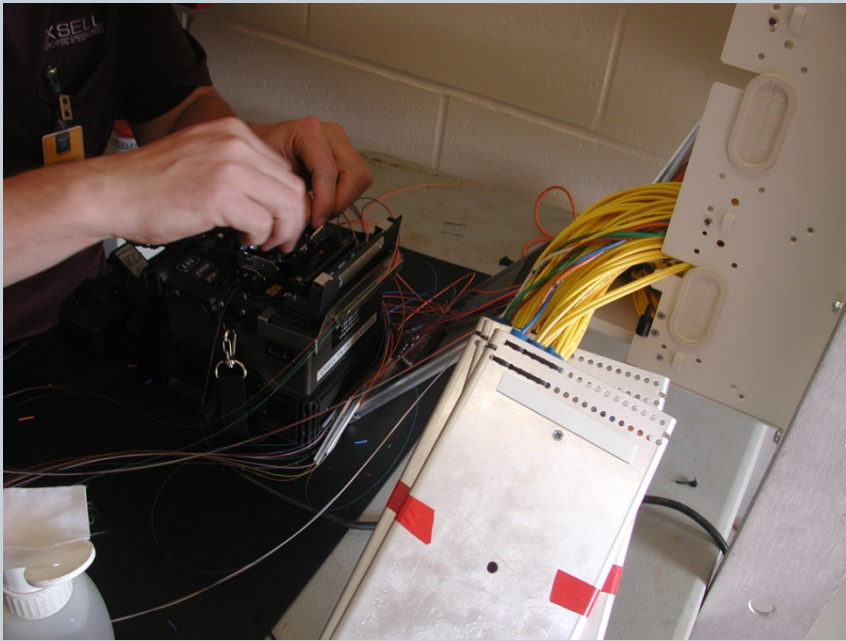
Barking Sands Entry



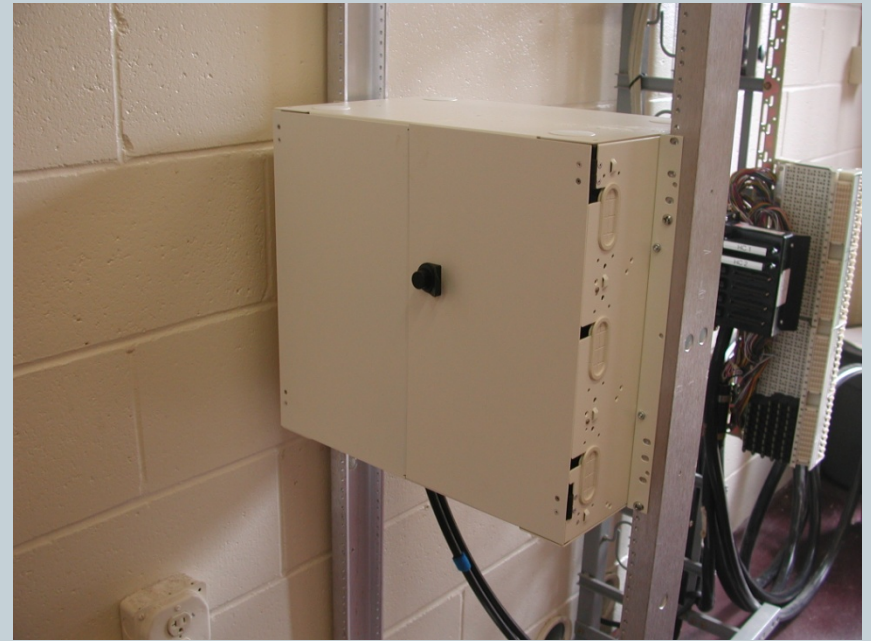
Fiber spaghetti



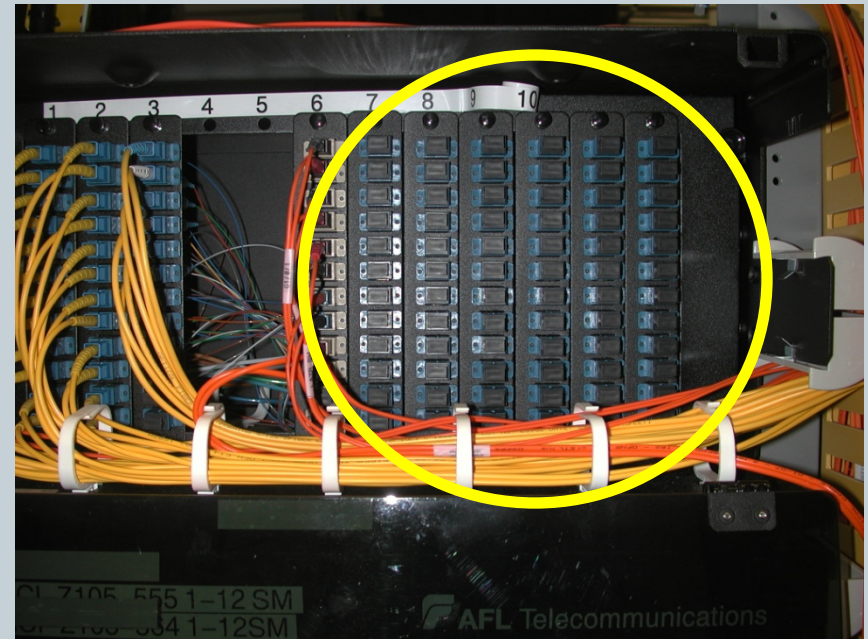
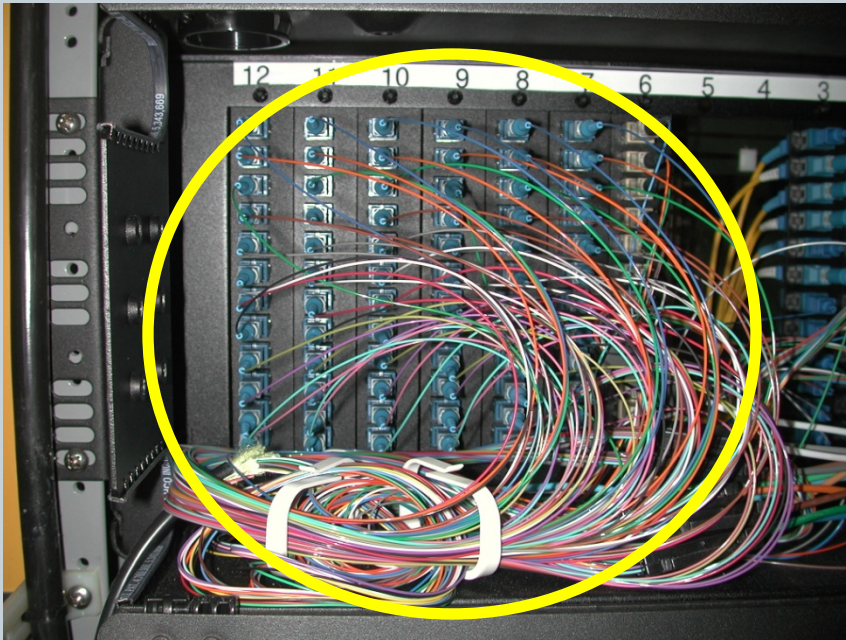
Kokee Comm B765



Kokee Comm B765



Barking Sands B105



THANK YOU!

