TAKNET COMMUNITY NETWORK

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intERLab, Asian Institute of Technology (AIT)

and

THNIC Foundation

Asia-Pacific Regional Community Networks Summit 2021
Innovating policymaking to connect the unconnected

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TakNET Team

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TakNet: Last meters access solution
Started in late 2013
TH Networking Camp

• Low-cost and locally available hardware running customizable embedded Linux.
• 802.11n 2.4GHz Wi-Fi services with maximum link speed of 150Mbps.
• Self-configuring, self-healing OLSR mesh networking.
**Our Technologies**

**DUMBO**
- **TPlink MR3040**
  - Coverage: 50-60 m
  - WiFi 2.4 GHz
  - Usage: Portable, Apply to emergency situation

**TPlink AC1750**
- Coverage: 100 m
- WiFi 2.4/5 GHz
- Usage: Static and Indoor

**Unifi Outdoor AP**
- Coverage: upto 200 m
- WiFi 2.4/5 GHz
- Usage: Outdoor, Link to GW

**Raspberry Pi**
- Micro Server
- Running local services (e.g., chat, VoD)

**Wok**
- DIY p2p antenna
- Extend the connectivity

Sixteen (16) WMN routers, with a total storage capacity of more than 250GB, have been installed in various houses and public locations.

These WMN routers automatically form a multi-hop wireless mesh network among the routers that are within range.

Web GUI manage is available for topology and status monitoring.
The Internet

EDU contents

4 - 10 Mbps
Gateway

Then the routers can perform day-time content delivery services to nearby client devices.

20 - 40+ Mbps

EDU contents

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EDU contents
Our Community Networks

Althea's software load balances, provides failover, and automatically chooses the best connection for you on a second-by-second basis.

As of July 2021

44 Active communities
400+ Households

Net2Home

Tak Community
Suphanburi Community
Chiangdao Community
Suphanburi Community as of July 2021

6 Active Communities

48 Households
Chiangdao Community as of July 2021

1. Active Community

9. Households

Chiangdao Community
Soon at Khlongtoei Area,
Bangkok
Soon in Lamphun

Althea’s software load balances, provides failover, and automates.
Applications on TakNet CN

DUMBO Chat

LOCAL CONTENT

HD Video Streaming

EDU contents

EDU contents

EDU contents

EDU contents
Applications on TakNet CN

SMART COMMUNITY
Applications on TakNet CN

SMART COMMUNITY
TakNet Lessons

STRONG COLLABORATION OF THREE MAIN PLAYERS
R&D TEAM (INTERLAB), MICRO ISP (NET2HOME) AND LOCAL
COMMUNITY’S PARTICIPATION
SIMPLE TECHNOLOGY: TECHNICAL MAINTENANCE AND
INSTALLATION ARE HANDLED BY LOCAL TECHNICIANS WITH
SUPPORT FROM THE NET2HOME AND INTERLAB TEAMS
ENGAGE WITH LOCAL COMMUNITY: TECHNOLOGY TRANSFER,
CREATE REVENUE FOR LOCAL TECH, HW OWNERSHIP
TAKNET IS GROWING: 1 VILLAGE/YEAR (2013-2016), 11
COMMUNITIES: SINCE 2017 WITH SUSTAINABLE MODEL,
SUPHANNET, CHIANGDAONET, LUMPHUNNET,....
Key Takeaway

CONNECTIVITY

CN + COMMERCIAL OPERATORS + UNDERSTANDING REGULATOR

ACCESSIBILITY:

LOCAL LANGUAGE

EDU:

NEED HELP TO BRING EDU CONTENT TO THE GRASSROOTS FREE OF CHARGE?
 evitar con CN!

Thank you.