

Best Practices for Fiber Design > Build > Operate

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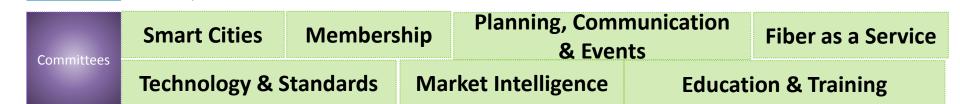
Jin Park



Established in **March 2005** Currently has 61 members 5 BoDs, DG & 7 working committees

Key Statistics 🔻		
297.8 M	436.5 M	
FTTH/B subscribers	FTTH/B Homes Passed	
Year-end 2016	Year-end 2016	
68 % Avg. Take Up Rate	+68% Subscriber Growth Rates Dec 2016	
13,493	94	
New Users/Hour	FTTx projects in Asia-Pacific	

Source: IDATE for FTTH Council APAC





FTTH Council Asia-Pacific Activities

- <u>Smart City</u> based upon 'optical fiber infrastructure' as an enabling technology creating a utility corridor
- <u>FaaS</u> fiber as a service with interfaces to the MEF (Metro Ethernet Forum) and TM Forum with an API for Logical Network Interface (LNI) to Physical Network Interface (PNI) link
- **<u>Regulatory</u>** to advise and recommend on fiber infrastructure
- **Education & Training** to ensure best practices

FTTx: Fiber Deep



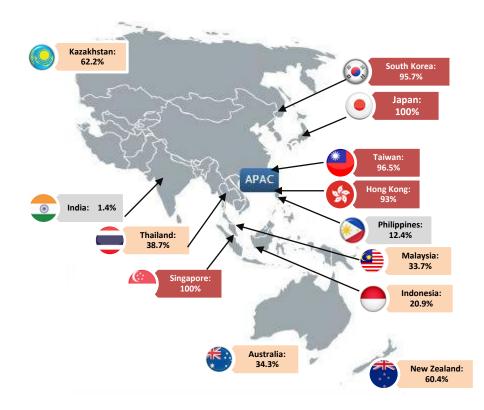
- FTTH (Home) ... to the home or condo unit, then WiFi or G.hn
- But, we also support ...
- FTTB (Building) ... such as a condo, then copper with VDSL/G.fast
- FTTC (Curb) ... with G.fast copper or **fixed wireless** 500 m 3.5 GHz
- FTTN (Node) ... regional hub
- HFC ... hybrid fiber coax with deeper fiber
- FTTA (Antenna) ...
 - With 3G typically 10 km to the smartphone
 - With 4G typically 2 km to the smartphone
 - With 5G typically 500 m to the smartphone

In all cases we move the fiber close to the user ... Fiber Deep

% FTTx Homes Passed of total Households



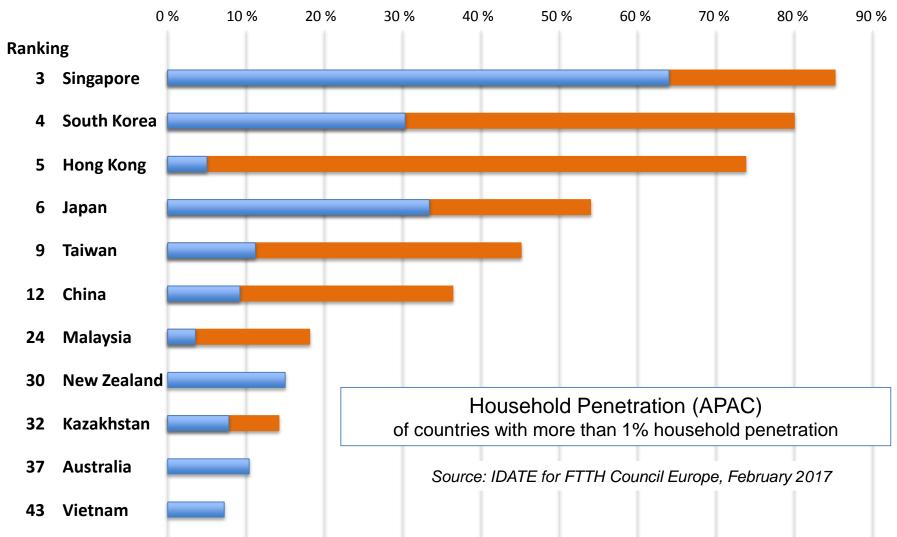
- > Number of Homes Passed not representative of effective coverage
- 5 countries > 90%
- 7 countries > 20%
- 1 country over 10%



Source: IDATE for FTTH Council APAC

APAC FTTH/B Rankings as of Oct 2016





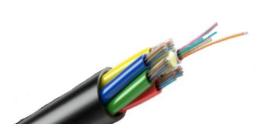


- Last year's activities for white papers / guidelines / best practices
- **Customer Premises Optical Connectivity Solutions** (White paper issued during Bangkok conference, May 2016)
- FCGA-Global Technology Committee established last year. FCGA is the platform for cooperation of the five global FTTH Councils to share a common goal: to ensure that regional efforts are combined with the power of global cooperation.
- Definition of Terms... Published on FTTH APAC website by August 2016 (by FTTH Council Global Alliance – FCGA)
- White Paper for 2017
- Fiber for 5G FTTA/antenna... Has been published during 2017 Annual Conference

FaaS: Fiber as a Service Committee



- With low world interest rates, <u>now is the time to invest</u> in an Open Shared Access fibre infrastructure
- Shared infrastructure provides a <u>faster deployment</u> for new applications: Cloud, IoT, CCTV ...
- FTTH Council Asia-Pacific white paper on "Fiber as a Service" FaaS shows industry standard provisioning via the TMF open API's
- FTTH Council Asia-Pacific white paper on "Fibre as a Service" shows these <u>sharing/rental options</u>;



Bandwidth – bits per second Wavelength – lambda (i.e. DWDM 1530.33 nm) Cable – multiple cores (48, 96, 216, ...) Tube – typically 12 cores Dark Fibre – single fibre core Duct – dark air Sub-duct – dark air



- Smart City definition based upon an optical fiber infrastructure as a utility corridor to build services such as e-Gov, IoT, IoE, FTTx ...
- FTTH/home, FTTB/building, FTTC/curb for fixed wireless, FTTA/antenna

Education & Training Committee



Council Endorsed Training Partners

- KABEX (Malaysia)
- ETEC (New Zealand)
- NTT (Japan)

Courses;

Fundamentals of Fiber OpticsFiber Optics Hands OnFTTH Testing and CommissioningSafety RequirementsOptical Splicing

Council Liaisons



ITU

Regulatory policy

TMForum

Fiber as a Service

TR259 – "Smart City Maturity and Benchmark Model"

Council Committee Papers



FTTH Council Asia-Pacific's Committees regularly produce technical papers which can be downloaded from the Council website.

ASIA PACIFIC I FREE W24	ASIA PACIFICI I INNE MALE	
Smart City Infrastructure Smart City Standards and Regional Projects by Smart Cites Committee	Fiber as a Service The access component of new ecosystems by Fiber as a Service (Facility Committee	Customer Premises Optical Connectivity Solutions By Technology & Sunsieria Committee
PTTHCAP_Withspace_Brant_China_3016_86_36_98		
Smart City Infrastructure	Fiber as a Service	Customer Premises Optical Connectivity Solutions
Estimation of Total Bandwidth and Number of Fiber Per Trench for FTIx Deployments By Smart Otta Committee	Study of Various Smart Applications Over PTTx Infrastructure as Per Degree of Fiber Penetration By Smart Clies Commitse	THE ROLE OF FIBER IN SG DEPLOYMENTS By Technology & Slandards Committee
White paper April 2017	White pager April 2017	White pagesr April 2017

Smart Cities Committee Paper 1

Smart Cities Committee Paper 2

Role of Fiber in 5G Deployment





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