

Peering in Asia Region

KDDI CORP.

IP Network Engineering
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KDDI IP Network Strategy

◆Gateway to Global network

Direct connectivity will help domestic/regional ISPs for routes to USA and Asia Pacific by;

- ✓ Co-locating equipment in the countries
- ✓ Connecting Asia-Pacific ISPs via submarine cables



Peering Definition

◆Peering is an important relationship for both parties

- ✓ Meeting the Peering Policy or being agreed each other, peer without ISP size big or small
- ✓ Traffic unbalance is not a peering/not-peering component, peering at party's advantage
- ✓ Peering is a solution to achieve a good network quality between parties (reduce AS hop, delay and etc.)
- => Peering should be built fairly once both parties agree to peer



Peering Challenges

Focusing on extending by submarine cable...

- **◆**Target on peering partners
 - ✓ Peering partner? Transit customer?
 - ✓ Reducing trans-pacific traffic
- ◆Negotiation & Setting
 - ✓ Sometime it goes slow with Asian ISPs
 - miss-communicating on arranging circuits?
 - taking too much time clarifying configuration?
 - just left the mail and forgot?
 - may be different language?
 - => Use local experts or interpreter
 - => Meet ISPs at the conference like APRICOT



Peering Challenges

Focusing on extending by submarine cable...

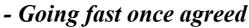
- ◆Keeping network quality...
 - **✓** Upgrade before traffic congestion
 - different network quality requirements?
 - PPM TG10
 - ✓ Upgrade trigger is not by user claim
 - considering cable lead time?



Characteristics from my perspective...

Easy





- Applying the same peering policy even to Asian ISPs?
- **√** Japan
 - Not English familiar ISP may have a chance to miss a peering request
 - Even don't meet the peering policy, reply to the request = polite
- ✓ Taiwan, Thailand, Singapore, Hong Kong -No difficulties
- **✓** Philippines
 - Arrangements of local link in Philippines take long time
 - Contact points should be regularly confirmed at APRICOT etc.
- **✓** India
 - -First step, finding a contact point is struggle
- **✓** Korea, China
 - Strict peering policy?



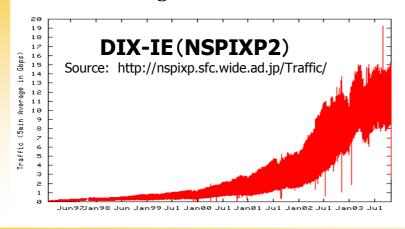


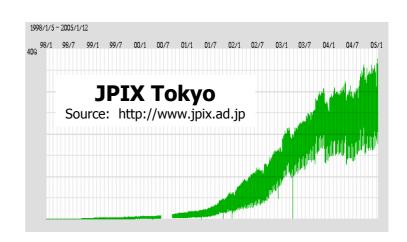


Peering in Japan

♦ISP, IX...

- **✓** Major ISPs
 - Carrier based
 - Independent
- ✓ IX
 - Metropolitan IX
 - Regional IX







Peering in Japan

◆Peering trend

- ✓ Over half of traffic is closed within Japan
- ✓ Characteristic of traffic (Applications)
- ✓ Private peer is recommended between major ISPs
- ✓ 10Gbps connection is getting popular
- ✓ Security is more sever
- ✓ Back up at different IXes
- **✓** Redundancy
- ✓ Site diversity