

## AI<sup>3</sup> updates

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WIDE Project

## AI<sup>3</sup> Earth Stations Including C-band UDL

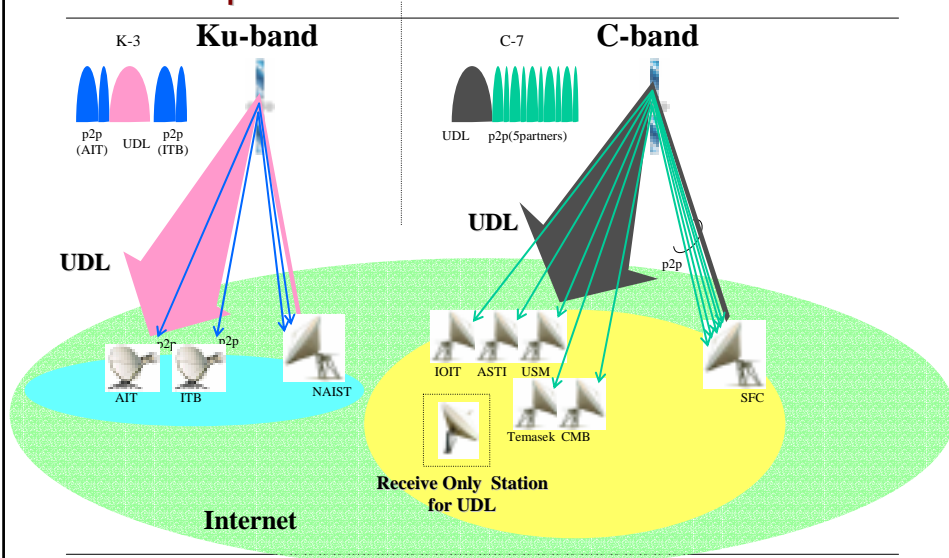
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## Our Link

- Satellite we are using
  - Ku band on JCSAT1b
  - C band on JCSAT3
- Point-to-point links and UDL
  - Asymmetric bandwidth assignment
    - E.g. 2Mbps to partners, 768kbps from partners
  - UDL = shared Ethernet
    - RFC3077
    - Easily consume bandwidth (e.g. by adding more receivers)
    - Aggressively control the number of partners who are using UDL.
  - UDL+P2P = our future standard configuration for each site
    - In some cases, p2p is on our satellite infrastructure

## UDL experiment in AI<sup>3</sup>



## Operation (1)

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- All partners have IPv6 network in operation.
    - WIDE, APAN are providing transit for global IPv6 infrastructure
  - Bandwidth starvation
    - Much better than 0bps (not connected), but “under 10Mbps” means less today.
    - UDL can make us easy to add bandwidth, but there is a limitation “whole transponder” (30Mbps around)
    - Future potential direction:
      - Use terrestrial links
      - Use new satellite which can provide us more bandwidth in a single transponder.
        - E.g. WINDS can provide multiple 100Mbps in a single transponder
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## Operation (2)

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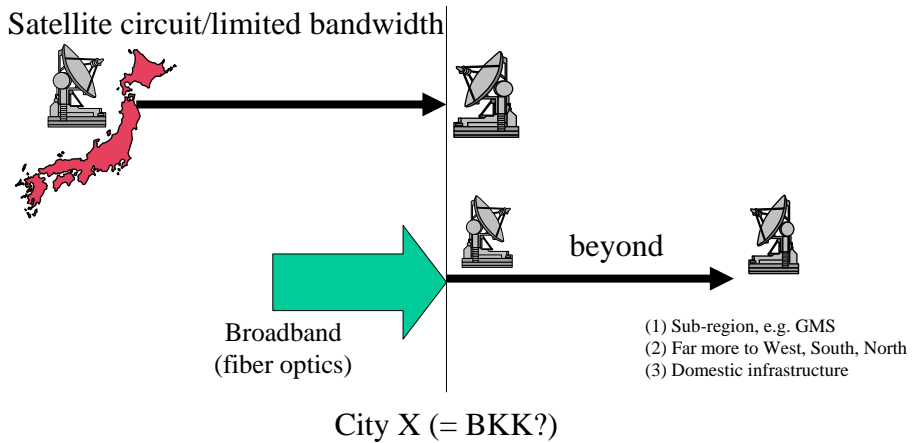
- 2 meeting / year
    - Discussions on research and operation
    - Synchronization
    - In S. E. Asia
    - April 23 – 25, Da Nang, VN
      - IOIT supports us.
  - SAINT2003 conference & workshop
    - WS: “Satellite communication and its applications”
    - Multiple papers appeared in main conference also.
    - IEEE computer society press
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## Operation (3)

- New Sat, New Initiative

- Ultra high-bandwidth satellite communication system
  - “WINDS”
  - Ka band
  - Around 2005
  - Involved to its design phase
- JP Gov. activity
  - Asian Broadband Backbone (ABB) project?
  - Will be presented at the next coming APEC/TEL27 conf held in KL in March
  - Big influences on AI3 itself, because we are using Gov money...

## Front line moves!



## Be an infrastructure for other project

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