

The IPv6 Testbeds for Multimedia Applications

**APAN2003, Fukuoka, Japan
2003. 1. 22**

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IPv6 Status in ETRI



■ KRv6 Project (<http://www.krv6.net>)

- 6TALK (<http://www.6talk.net>)
- 6ANTS (<http://www.6ants.net>)
- **6NEAT** (<http://www.6neat.net>)
- Production Address Allocation
 - ETRI-KRNIC-KR, 2001:230::/32 (99.11)



■ 6Bone-KR (<http://www.6bone.ne.kr>)

- Experimental and Tunneling IPv6 Network (over IPv4)
- 58 organizations are involved in 6Bone-KR
- ETRI/KR, 3ffe:2e00::/24 (98.5)



■ IPv6 Forum Korea

- Launched at March 17, 2000
- Chair : Dr. Kishik Park
- Currently 70 of organization members
- <http://www.ipv6.or.kr>





■ What is 6NEAT

- IPv6 Network and Application Testbed

■ Goal of project

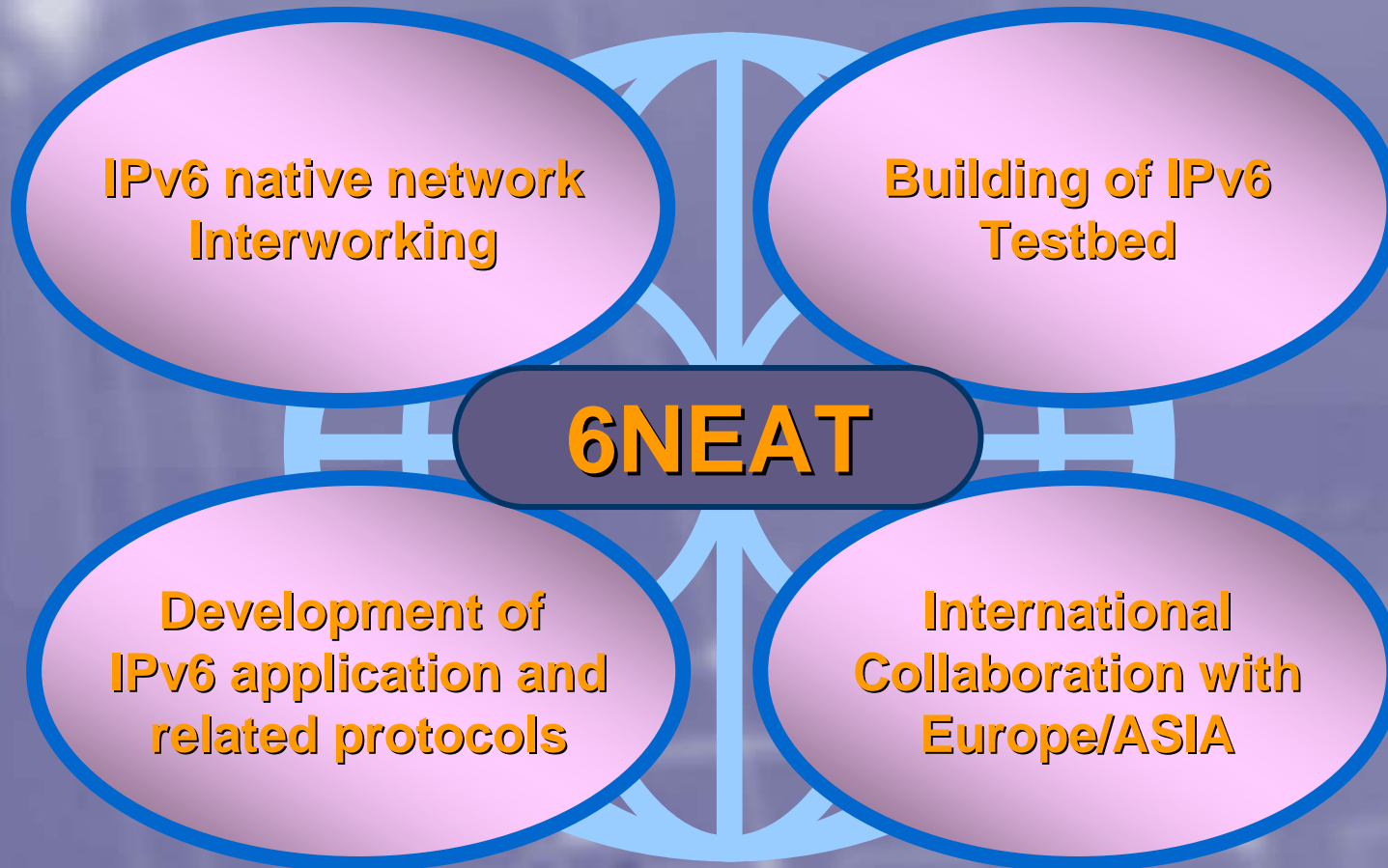
- Developing of Advanced IPv6 networking Technologies and Applications
- Verifying & Ensuring of IPv6 Implementations and Protocol suites
- Contributing to cooperation between Asia and Europe
 - ETRI is a international partner of 6WINIT and 6NET
- Over TEIN, <http://www.transeurasia.org/>



■ Launched by ETRI, (2001-2003)

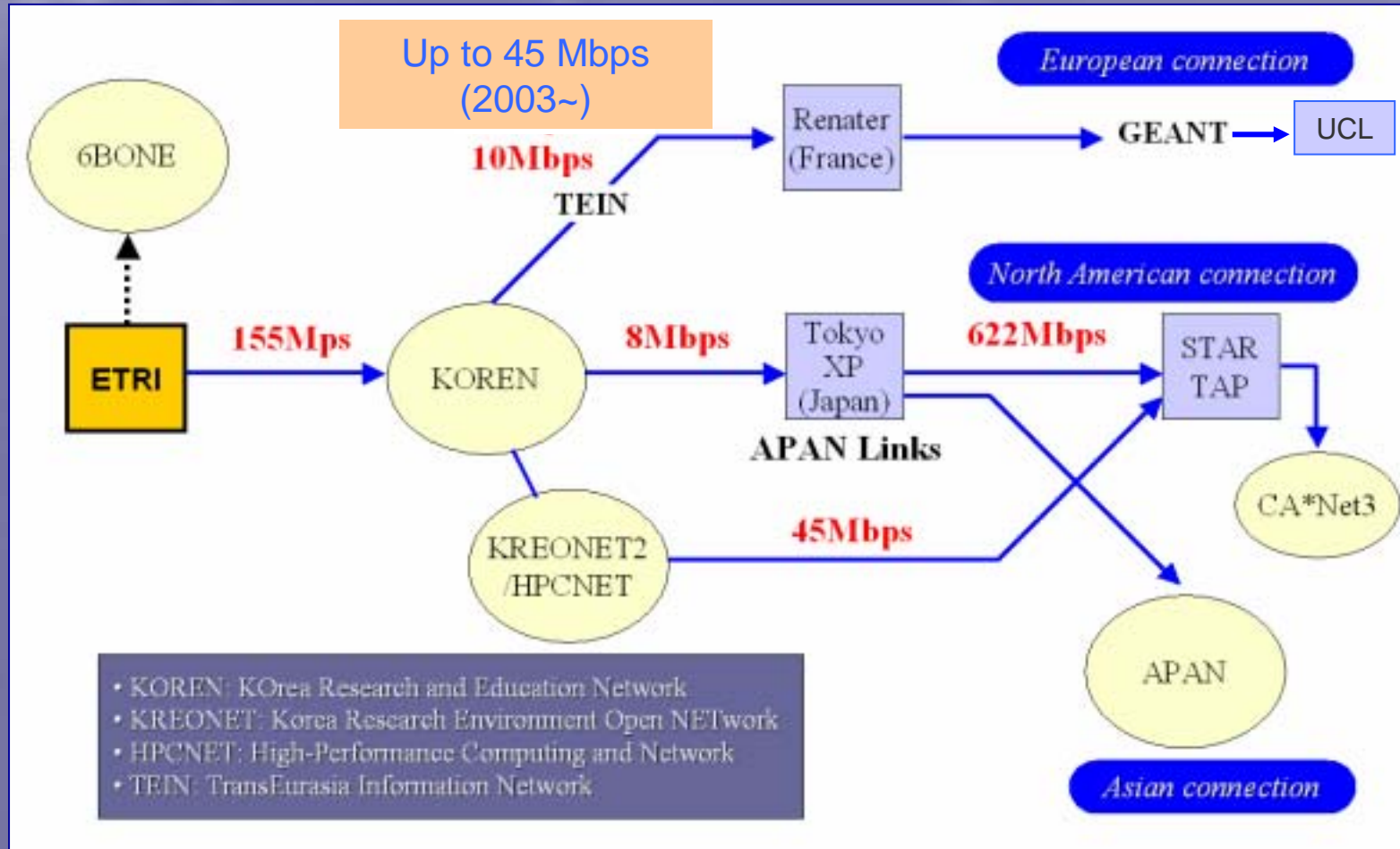
- <http://www.6neat.net>

6NEAT Activities



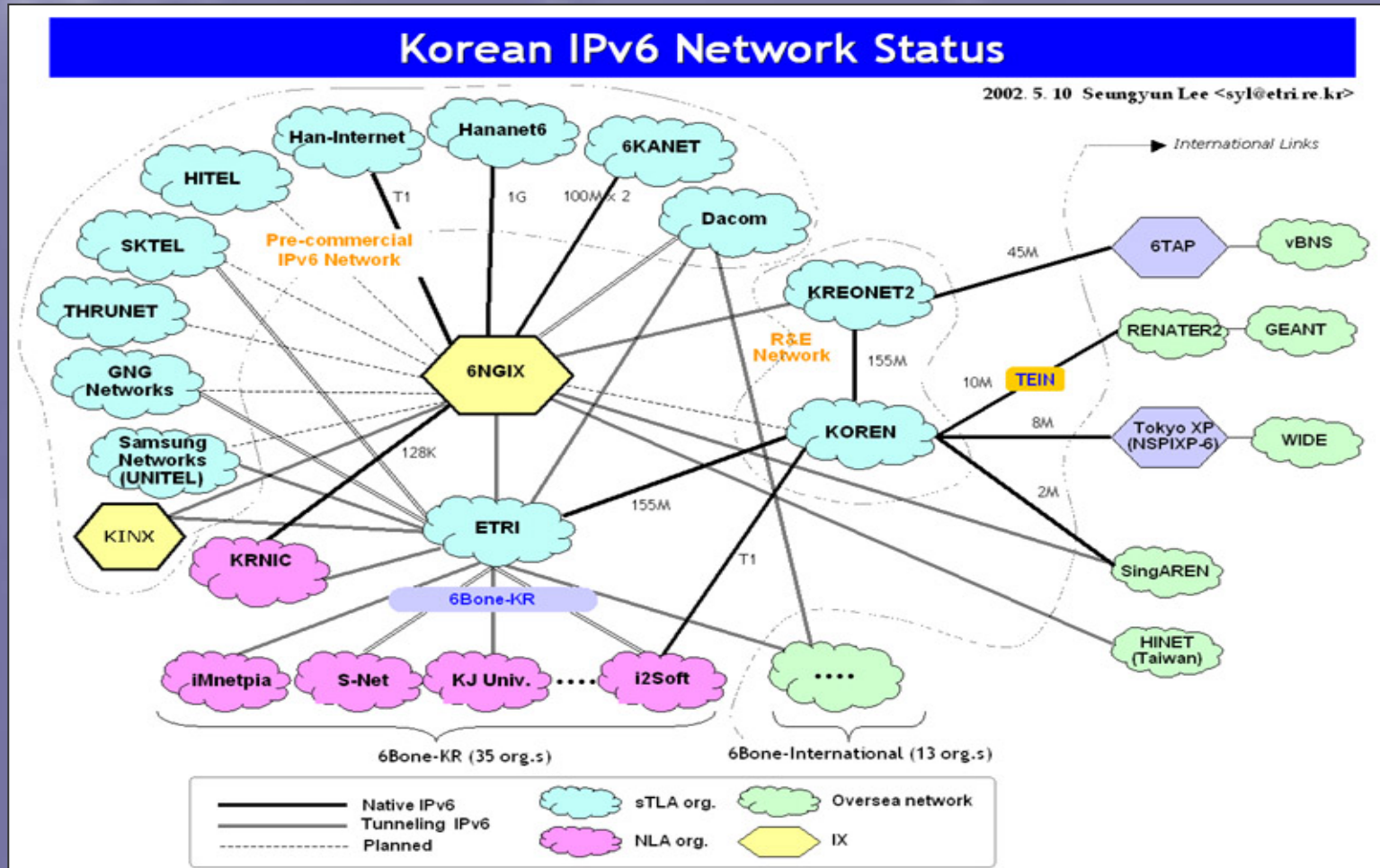
IPv6 Connection in ETRI

■ Global Network Connectivity, ETRI



IPv6 Connection in ETRI

■ Global IPv6 Network Connectivity, Korea



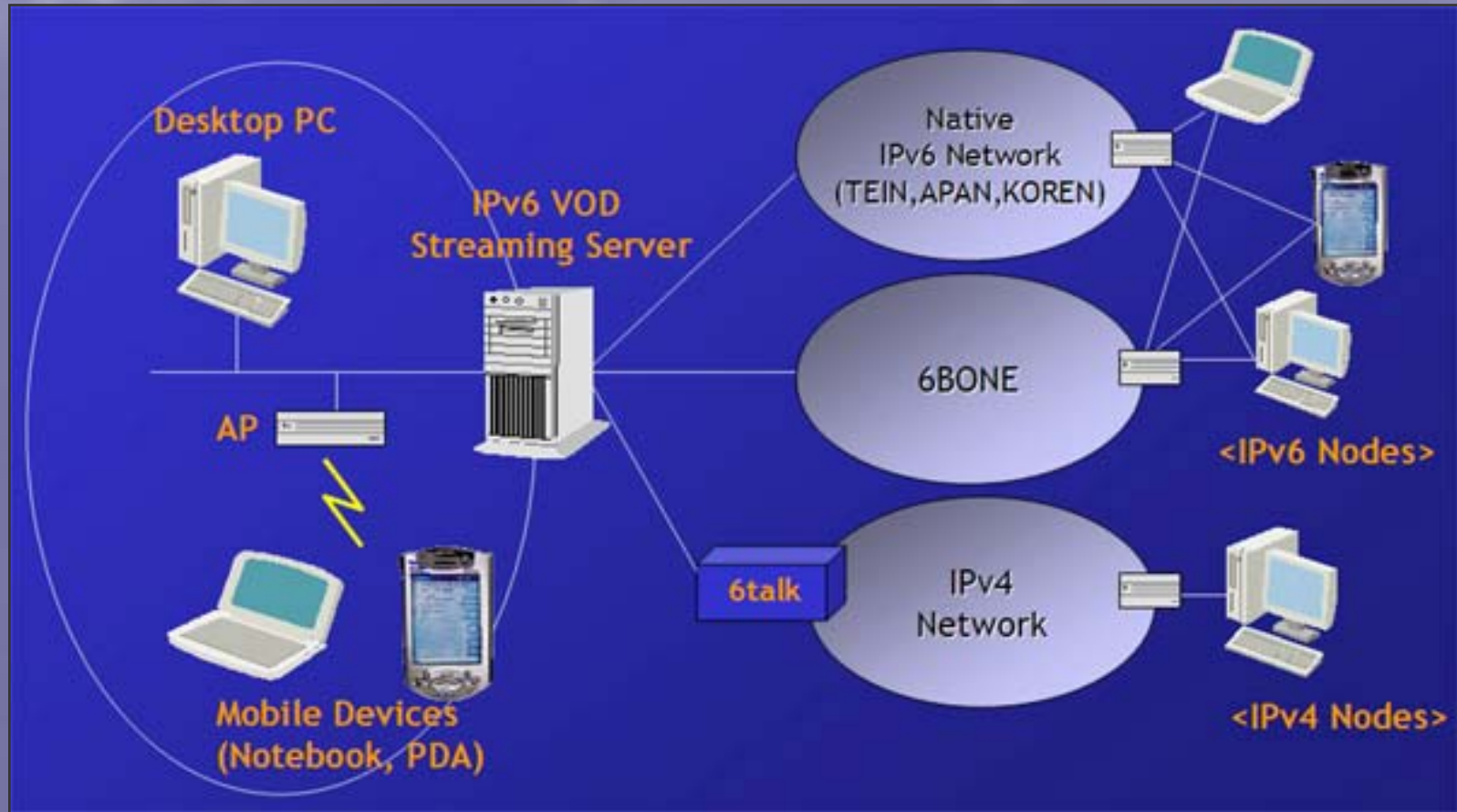
IPv6 Multimedia Application Testbed

■ IPv6 Video Streaming

- has developed the IPv6 based video streaming which consists of on-demand video streaming engine, monitoring tool and clients.
- supports a streaming over both IPv4 and IPv6 protocol and also supports the RTP and HTTP based streaming
- Platform
 - Server : Linux based (currently running on the Kernel 2.4.18)
 - Client : Linux & Windows 2000/XP
- Supporting Type of Media
 - MPEG-1, MPEG-2(PS), MPEG-4(divx, wmv, asf)
- Web Service
 - <http://v6stream.6neat.net>

IPv6 Multimedia Application Testbed

■ IPv6 Video Streaming Testbed



IPv6 Multimedia Application Testbed

■ IPv6 Video Streaming – Web Service

- <http://v6stream.6neat.net>



➢ Media Player (Windows)



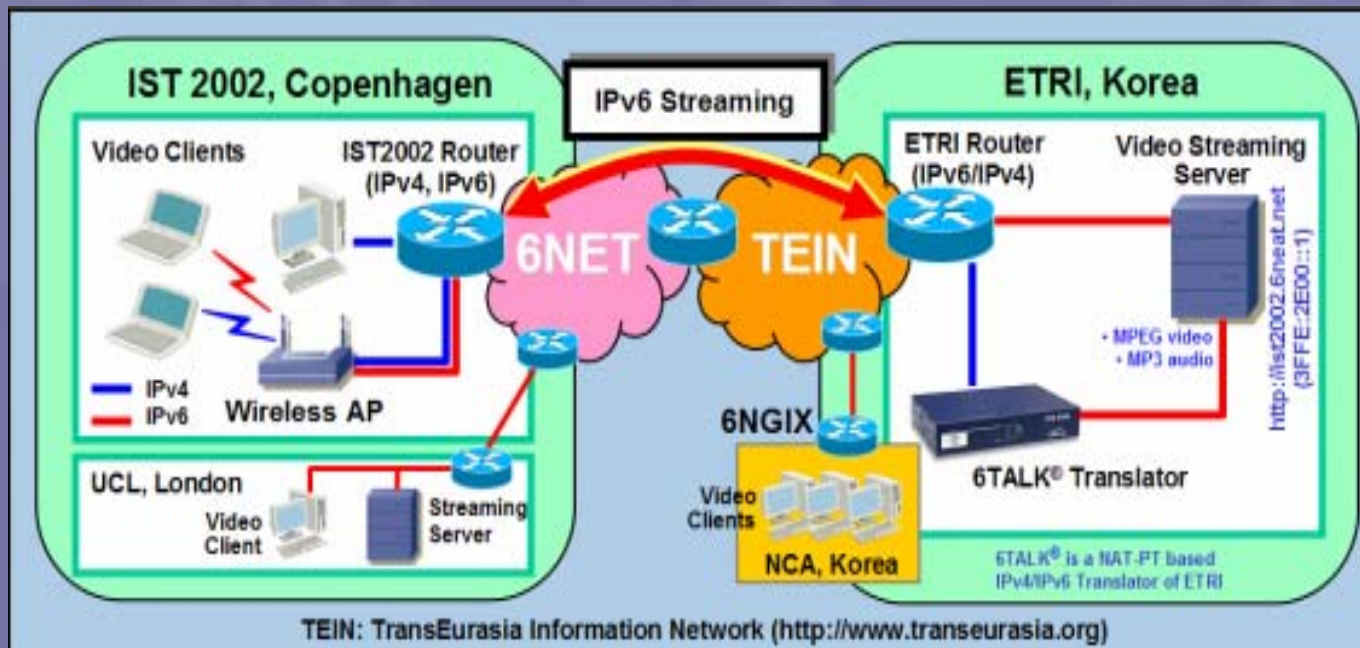
➢ Media Player (Linux)



Experimental Works

■ IST2002

- with IPv6 streaming system, ETRI has joined the IST2002 demonstration event (<http://2002.istevent.cec.eu.int>)
- <http://ist2002.6neat.net>



IPv6 Multimedia Application Testbed

- IPv6 Video/Audio Conferencing Tool
 - has developed the MPEG-based IPv6 video/audio conferencing tool
 - HVCT : high quality video conferencing tool
 - HAT : high quality audio conferencing tool
 - In this system, we are using the MS Technology-preview version of IPv6 stack running on Windows 2000 OS.
 - Codec
 - Video : Microsoft MPEG-4 video codec v1
 - Audio : MPEG Layer-3 codec
 - Support two types of communication
 - n-to-n (multicast)
 - 1-to-1 (unicast)

Experimental Works

- IPv6 Multicast Conferencing Experiment
 - UCL(UK), Renater2(FR), SNU(Kor), ETRI(Kor)
 - <http://6mcast.6neat.net>
 - contains the results from the test work of IPv6 multicast applications.



Conclusions

■ Summary

- IPv6 in ETRI side
- IPv6 testbeds for multimedia applications
 - IPv6 Video Streaming
 - IPv6 Video/Audio Conferencing
- Experiment

■ Future work

- Testbeds & applications
 - For IPv6 activation, ETRI is planning the extension of testbeds and applications continuously.
- Collaboration
 - ETRI will contribute to the deployment of IPv6 in the Asia-Pacific region, as well as worldwide.

Thank you

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