

Re: The banding problem, or Pretend You're a Router

Source: <http://coding.derkeiler.com/Archive/Java/comp.lang.java.programmer/2004-07/3399.html>

From: Roedy Green (look-on_at_mindprod.com.invalid)

Date: 07/25/04

Date: Sun, 25 Jul 2004 19:47:18 GMT

On Sat, 24 Jul 2004 15:08:56 GMT, Roedy Green
<look-on@mindprod.com.invalid> wrote or quoted :

>A router in IPv6 has packets coming in each labelled with an 128-bit
>destination. The router is directly connected to N other nodes. You
>have a giant table of IP bands/ranges, and which node each range goes
>to.

It might turn out in the long run, ironically that 128 bit IP switching is actually faster than 32 bit. Why? It would be easier to keep a 128-bit address space more closely matched to physical geography. You might actually need fewer entries in a router mapping table to describe the routing. As IPv4 gets more and more full, the routing tables explode in complexity dealing with the little exceptions.

I was happy to read in that ETH paper that there does exist a reasonably scaleable algorithm for IPv6 lookup.

It quite amazing that the Internet has managed to deal with the growth with so little problem. Imagine what would happen if the electric or phone system had to grow that fast.

I further suppose that if worse came to worse, you could use approximate routing using abbreviated tables on packets with a long TTL, and accurate routing on ones about to die soon if they don't get to their destinations.

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Canadian Mind Products, Roedy Green.

Coaching, problem solving, economical contract programming.

See <http://mindprod.com/jqloss/jqloss.html> for The Java Glossary.