

BGP scaling revisited

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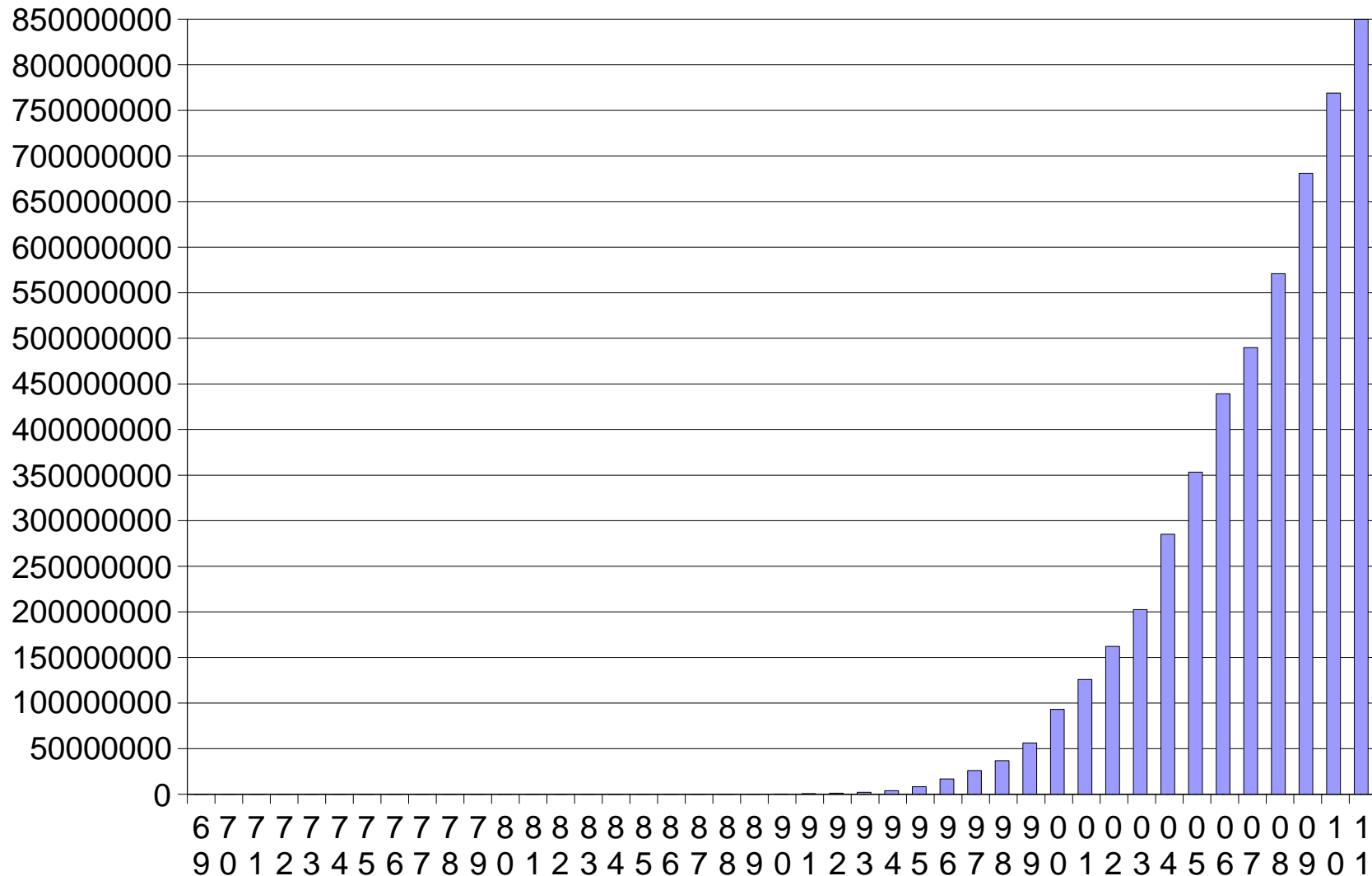
What's the BGP question again?

- Are there any interesting long-term relationships between the size of the globally addressable Internet and the size of the BGP4 system?

What data do we have?

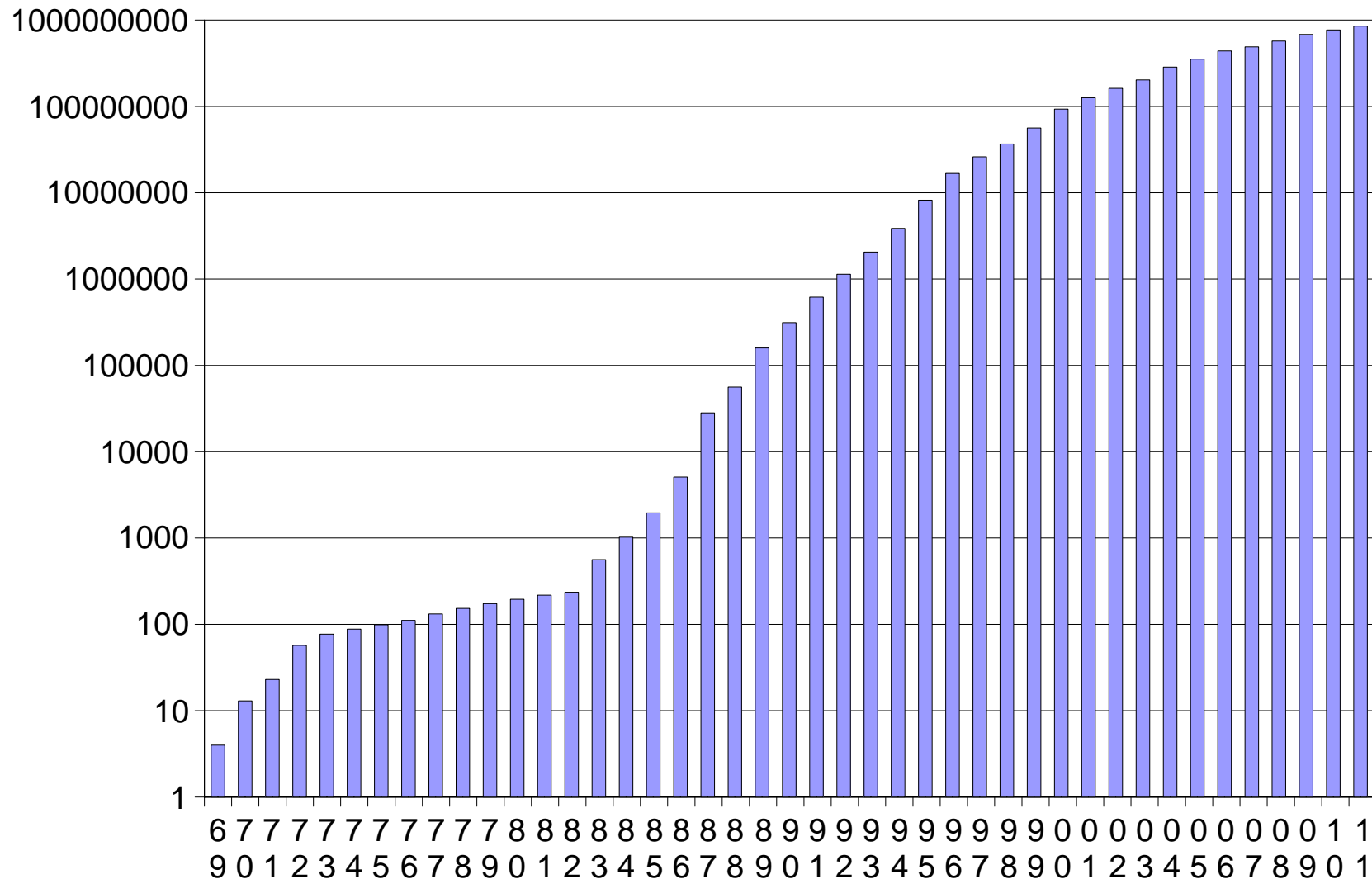
- We have BGP4 data back to 1994 and active AS data back to 1997 (thanks potaroo.net)
- We have domain count data back to 1994 (thanks ISC.org)
 - the domain count is a reasonable lower bound on the number of directly accessible IPv4 interfaces with global addresses
 - if you don't agree with this assertion please talk to ISC about it ;-)
 - (for earlier years we have actual host counts)

Domain count history

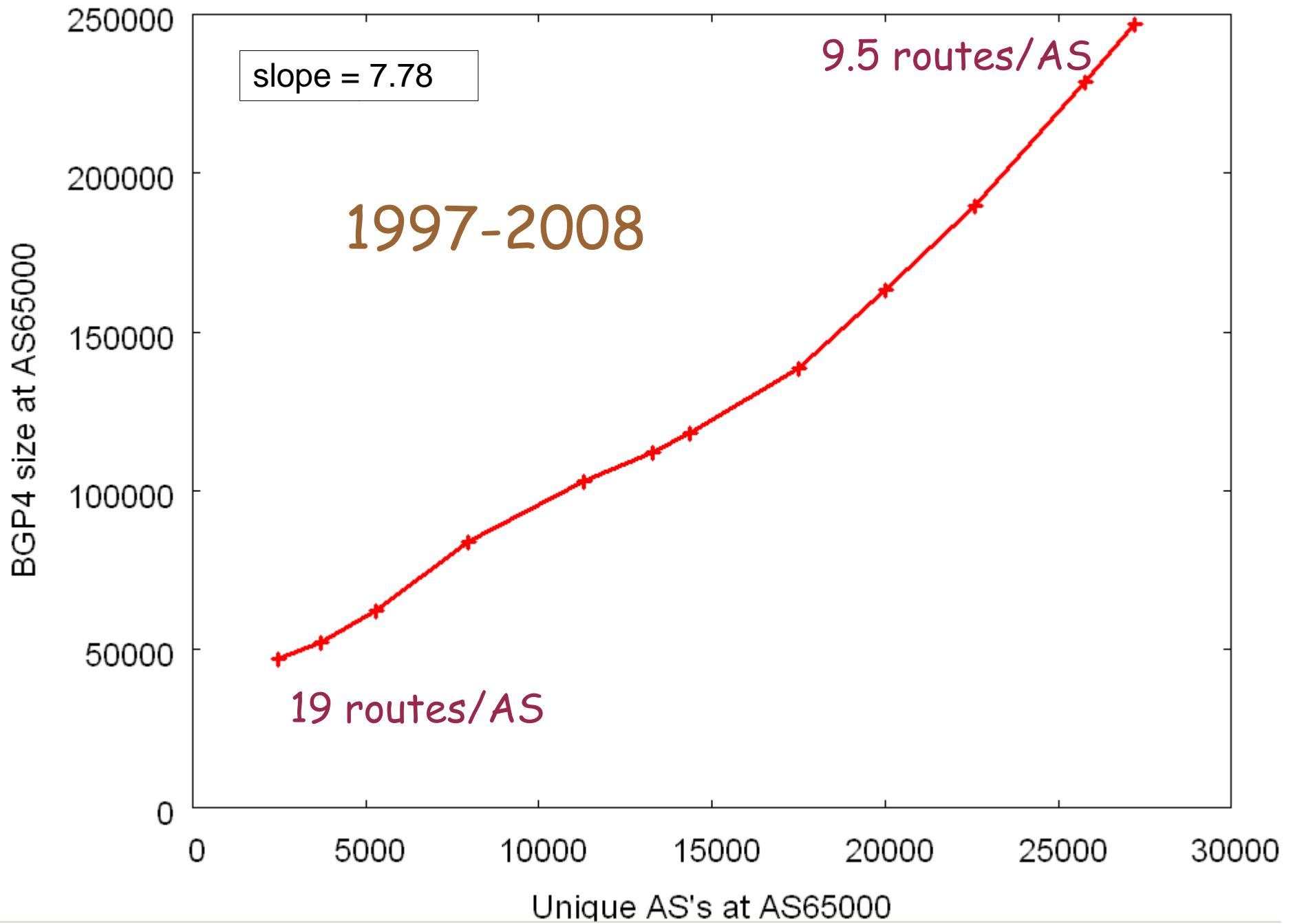


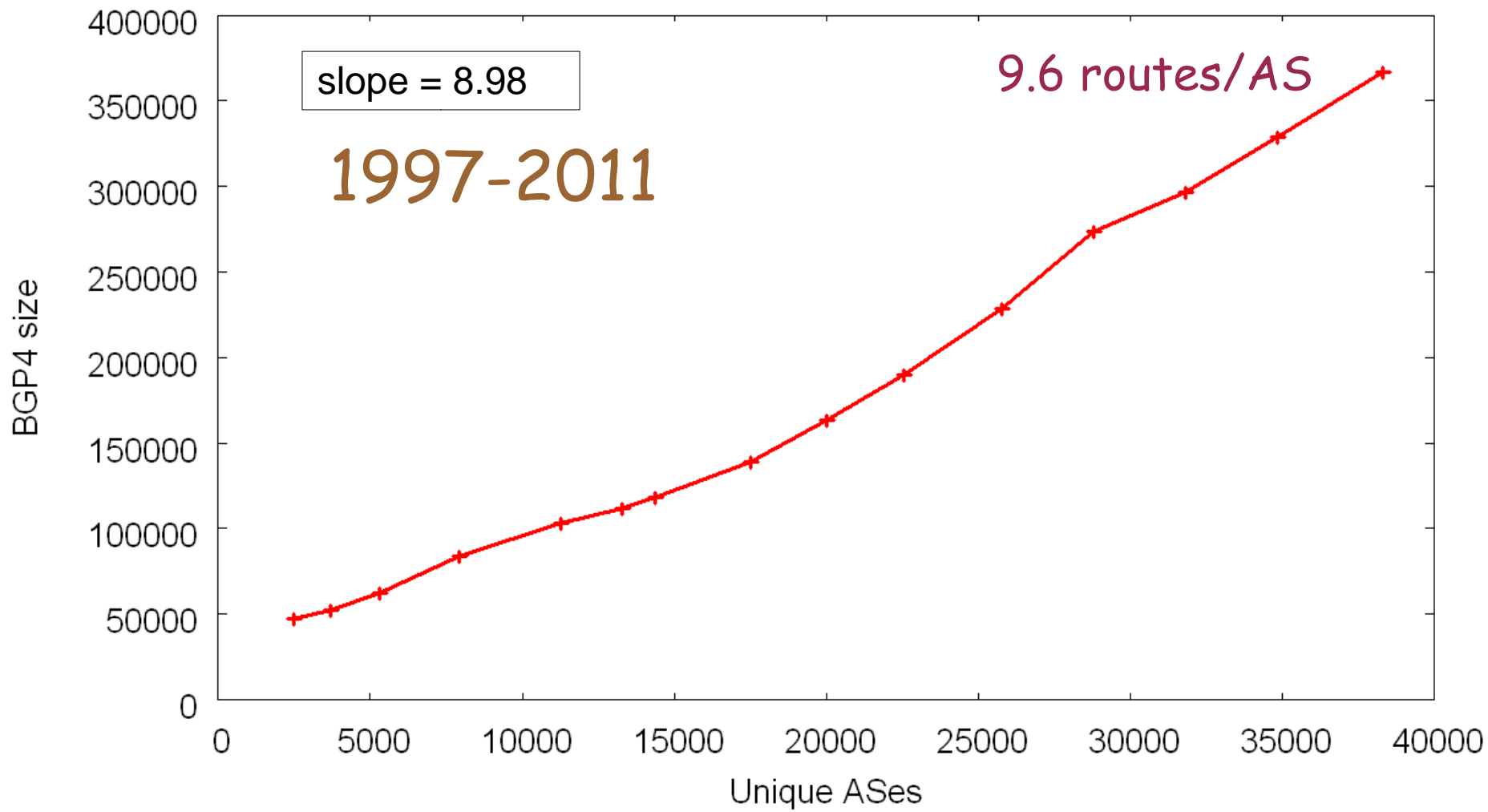
Data from <http://www.isc.org/>

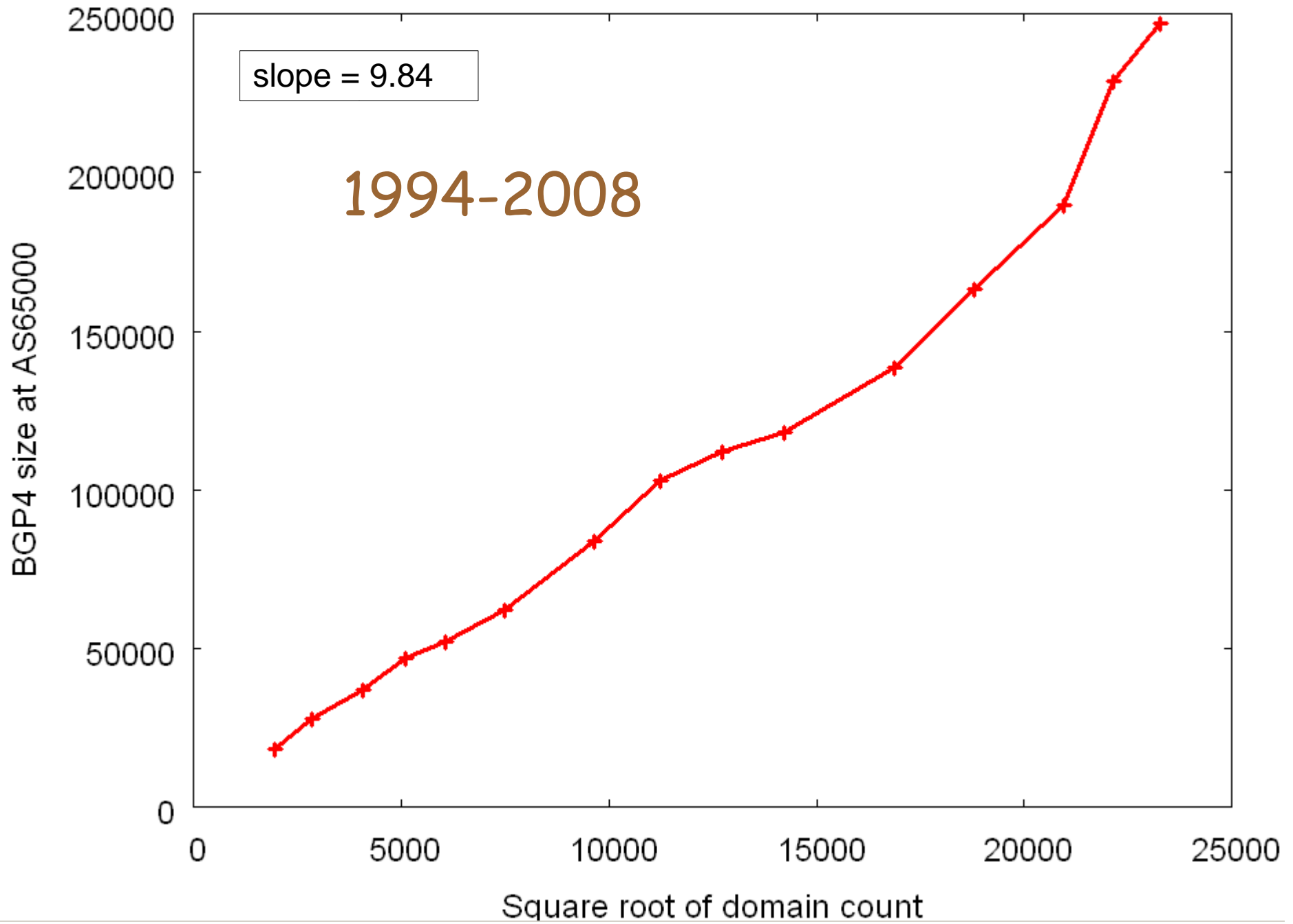
Domain count history knitted onto host count history (log scale)

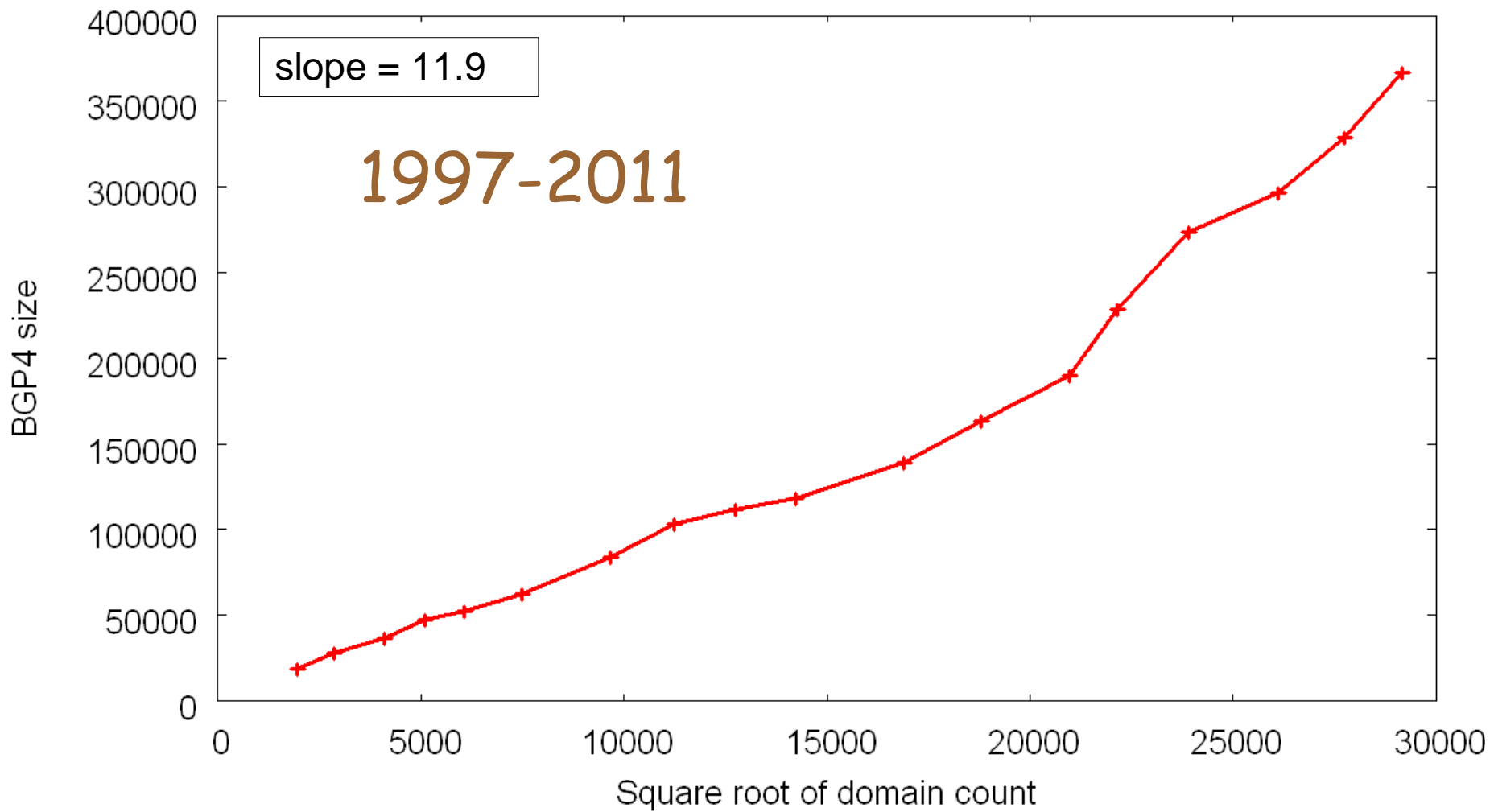


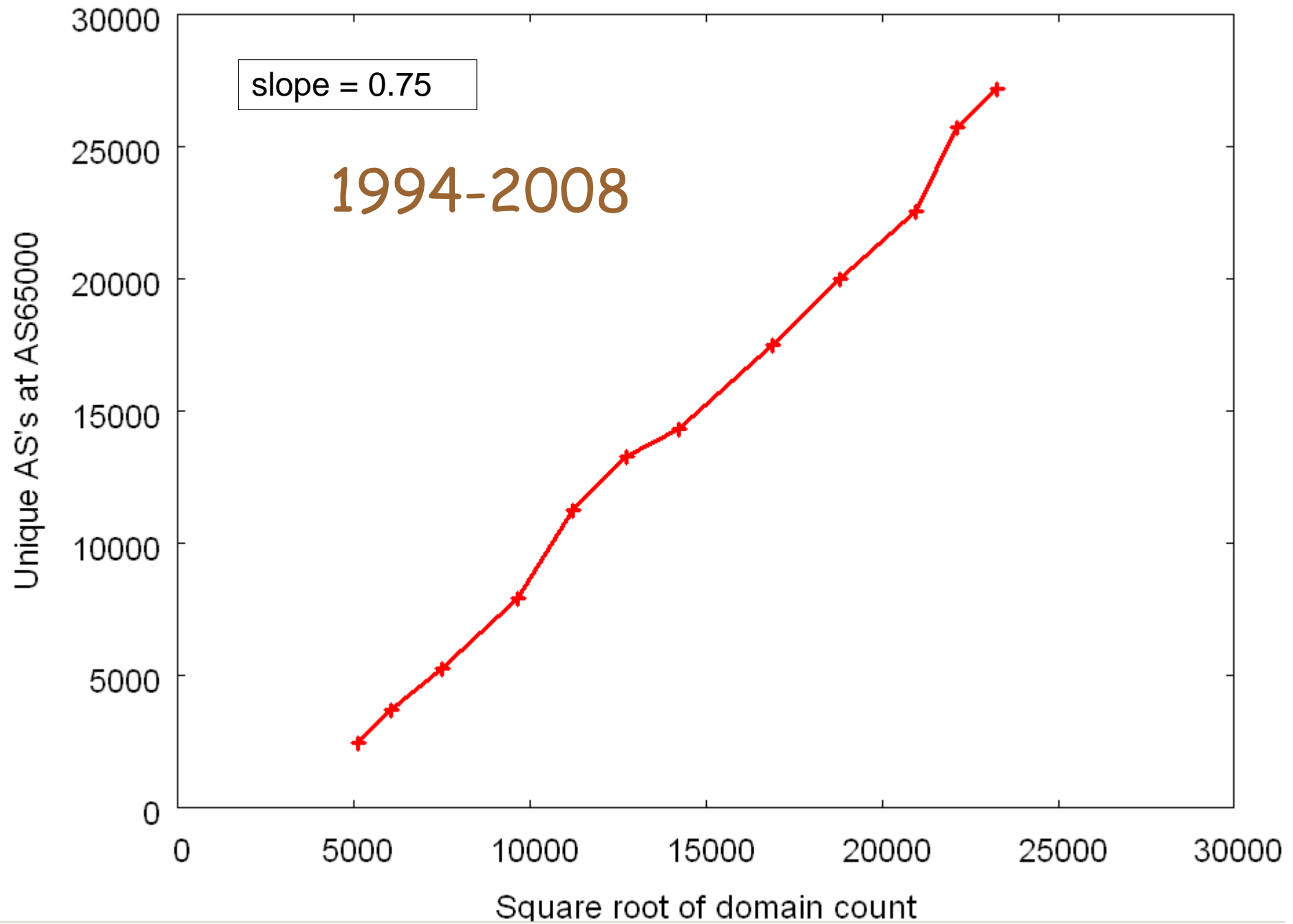
Data from <http://www.isc.org/> and other sources

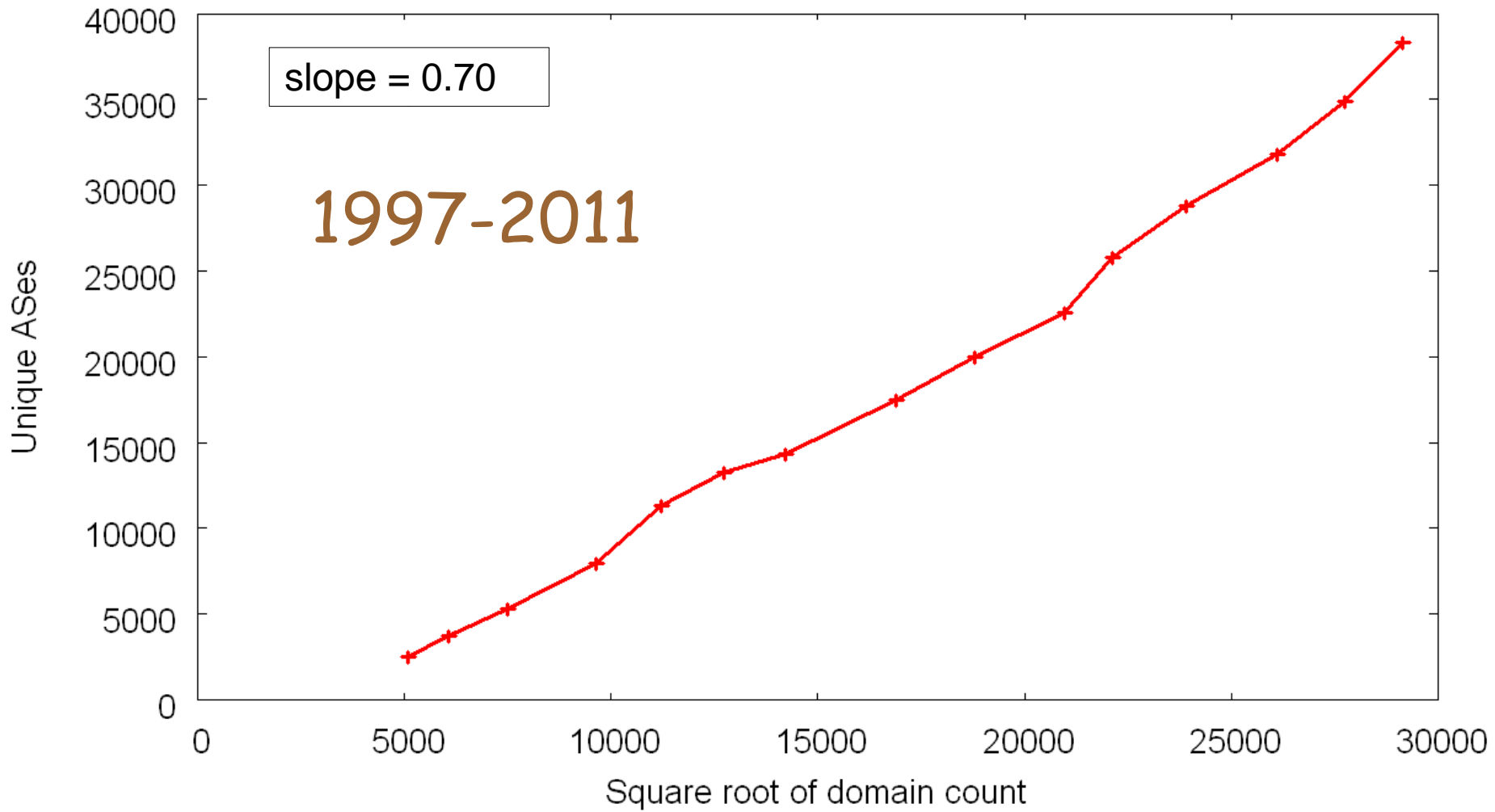












What do we learn?

- BGP4 as a whole is scaling something like the square root of the total size of the addressable Internet.
- This is a Good Thing.
 - It could have been so much worse.
- But it only holds true as long as operational policy and habits don't change.
 - Complacency is not in order.