caida update

17 march 2006

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the significant problems we face cannot be solved
by the same level of thinking that created them.
--Albert Einstein

caida recent activities

- first caida annual report!
- conmi workshop report (nsf)
- finishing up IMDC for release
- analysis of skitter topology data usage, impact, and futures
- ascore 2005: IPv4 vs IPv6 (matthew and brad)
- asrank: IPv4, IPv6 (matthew and brad's new map), young
- improving data pages (colleen leads) http://www.caida.org/data/
- web site upgrade -- last week! (josh led)
- security: ucsd network telescope (collaboration with CCIED)
- PREDICT: dhs project to scale sensitive data sharing (colleen)
- dns: oarc: collaboration with ISC (f-root) (duane, hao)
- routing: future interdomain routing (dima)
- macroscopic topology structure/evolution (dima, fontas, brad)
- tools: cuttlefish, dsc, coralreef
- departures: andre, margaret, brendan
- new baby elf!: kiera beth shannon moore
- new hires: hao (dns) josh (tech manager), tom (sysadmin) tom (economics)
- visiting scholars: hyunchul (kr), ziqian (cn), nevil, mjl (2006)

caida 2006-2007 priorities

- imdc alpha release in april
- nlanr measurement equipment: amp and pma, help integrate
- analysis of global consumption of IP addresses (ARIN talks, web pages today), scenario planning
- oarc: analyze dns traffic at root servers, dsc workload analysis s/w to roots
- open resolver probing, diagnosis, repair support (dw)
- topology analysis, AS relationship inference, asrank (young)
- topology measurement infrastructure upgrade (mjl)
- continue security (worm/virus) analysis (david,colleen)
- scalable routing for future networks (dima)
- economics of provisioning (tom)
- ‘top problems of the Internet’ (kc)
- begin community building for “day-in-life-of-Internet” experiment

more than we can do (plz take some!)

caida publications 2005-2006

1) “Inferring AS Relationships: Dead End or Lively Beginning?” (fontas,dima,brad)
2) “Remote physical device fingerprinting” (yoshi, andre)
3) “Robust System for Accurate Real-time Summaries of Internet Traffic” (ken,christian,david)
4) “Lessons from Three Views of the Internet Topology: Tech. Report”, (priya,dima,amin, etal)
5) “Classifying the Types of Autonomous Systems in the Internet” (fontas, dima, george)
6) “ Impact of Degree Correlations on Topology Generators” (priya, dima, amin, etal)
7) “The Internet AS-Level Topology: Three Data Sources and One Definitive Metric” (priya,dima)
8) “ Inferring Internet Denial-of-Service Activity” (david,colleen,etal)

presentations

1) “the Internet as emerging critical infrastructure: what needs to be measured?" (OECD, Mar '06)
2) "caida priorities: 2006-2008" (WIDE/CNRS, Feb '06)
3) "the Internet as emerging critical infrastructure: what needs to be measured?" (LSN, Nov '05)
4) "apocalypse then": ipv4 address space depletion" (ARIN, Oct '05)
5) "RFC1918 updates on servers near M and F roots" (OARC, Jul '05)
6) "[Ii]nternet [applications] drivers of growth: 2005-2015" (OIDA, Jun '05)
7) "Overview of CAIDA Data Collection, Analysis and Visualization" (IIJ, Jun '05)
8) "top problems of the Internet and what can be done to help" (AUSCERT, '05)

measurement accuracy is the only fail-safe means of distinguishing what is true from what one imagines, and even of defining what true means.

..this simple idea captures the essence of the physicist's mind and explains why they are always so obsessed with mathematics and numbers: through precision, one exposes falsehood.

a subtle but inevitable consequence of this attitude is that truth and measurement technology are inextricably linked.

-- robert b laughlin, a different universe,