Using Early Results from the 'spamHINTS' Project to Estimate an ISP Abuse Team's Task

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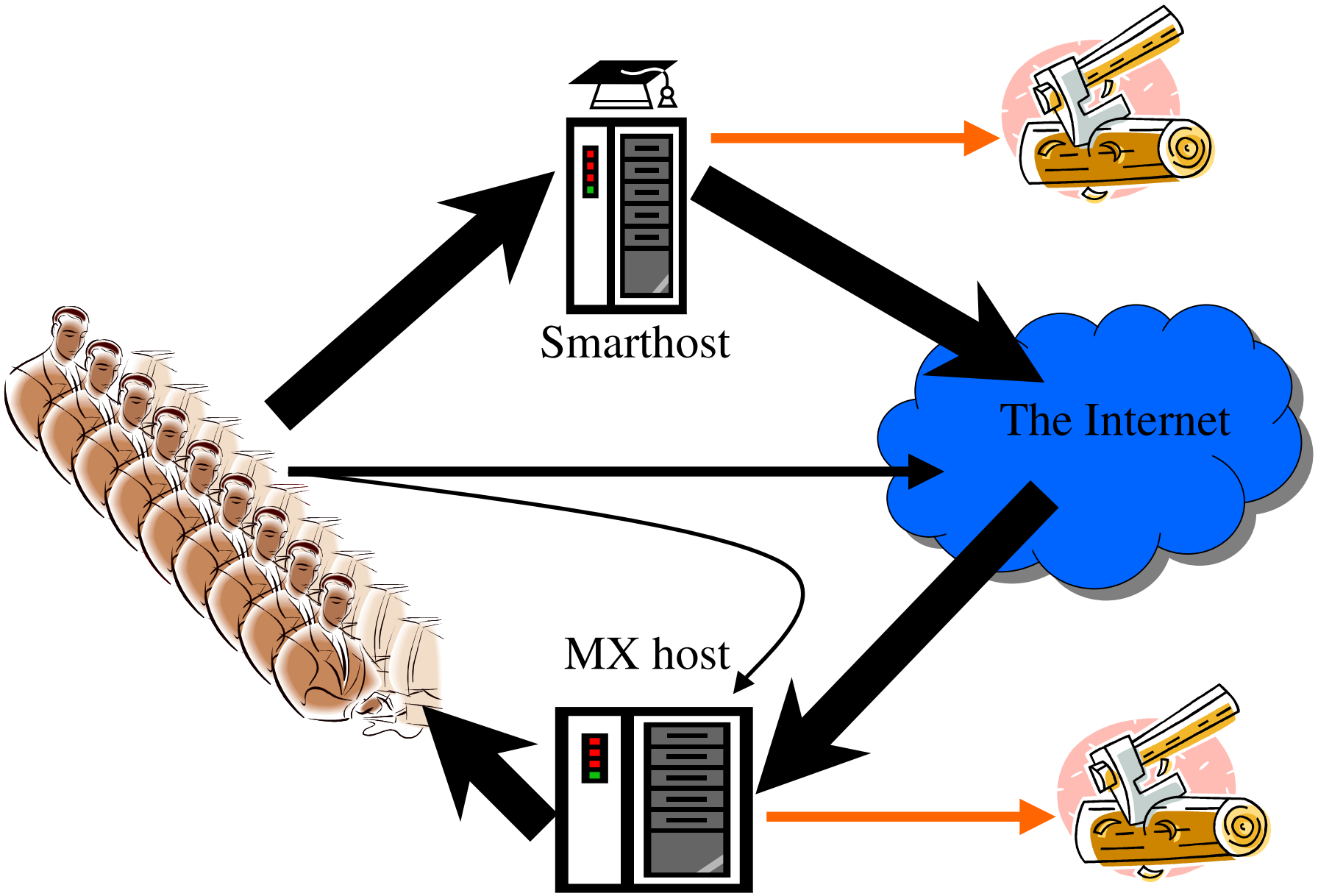
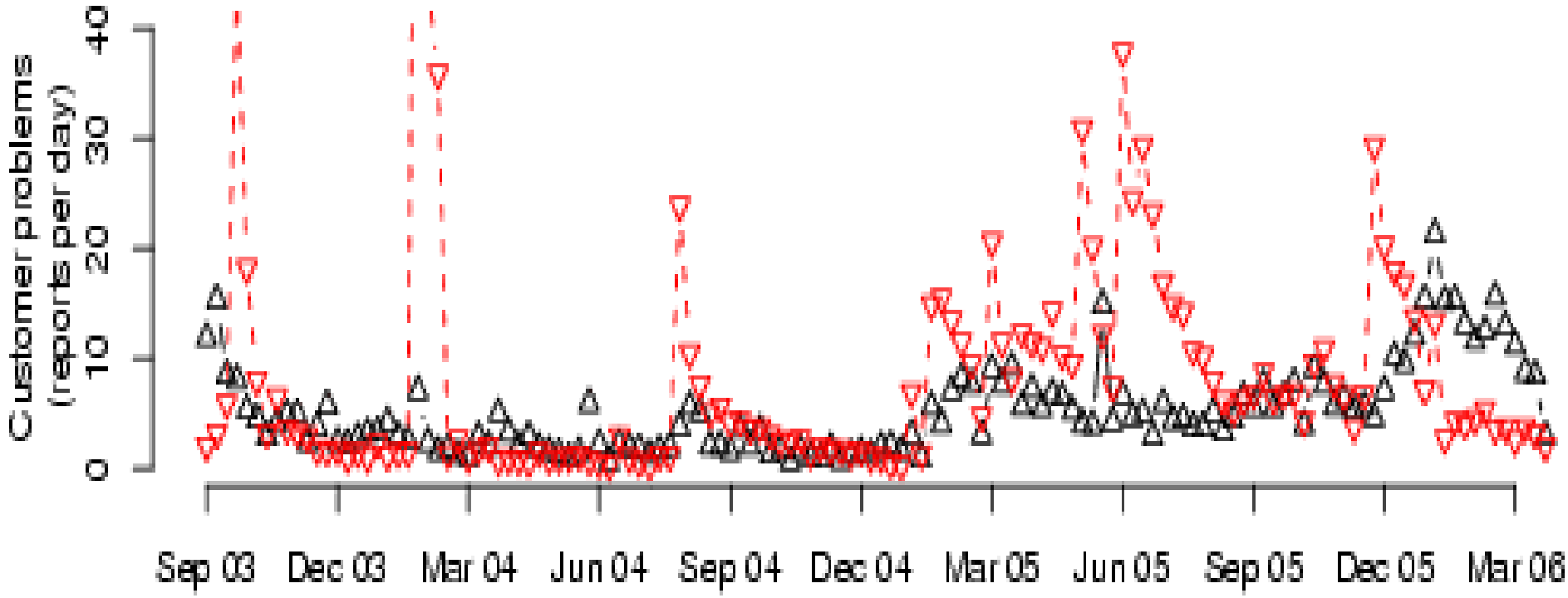
ISP Email Handling



Email Log Processing @ Demon



Detection of spam (black) and viruses (red)

Detection Ratios (spam)

Count	AS	Description	Ratio
80319	AS4134	CHINANET (CN)	55%
75980	AS4766	Korea Telecom (KR)	62%
47578	AS4812	China Telecom (CN)	59%
18683	AS9318	Hanaro Telecom (KR)	53%
12609	AS4837	CNC (CN)	38%
5792	AS12322	Proxad (FR)	38%
4941	AS3786	Dacom Corporation (KR)	67%
4779	AS7738	TeleBahia (BR)	21%
3929	AS9277	Thrunet (KR)	62%
3911	AS3320	Deutsche Telecom (DE)	16%

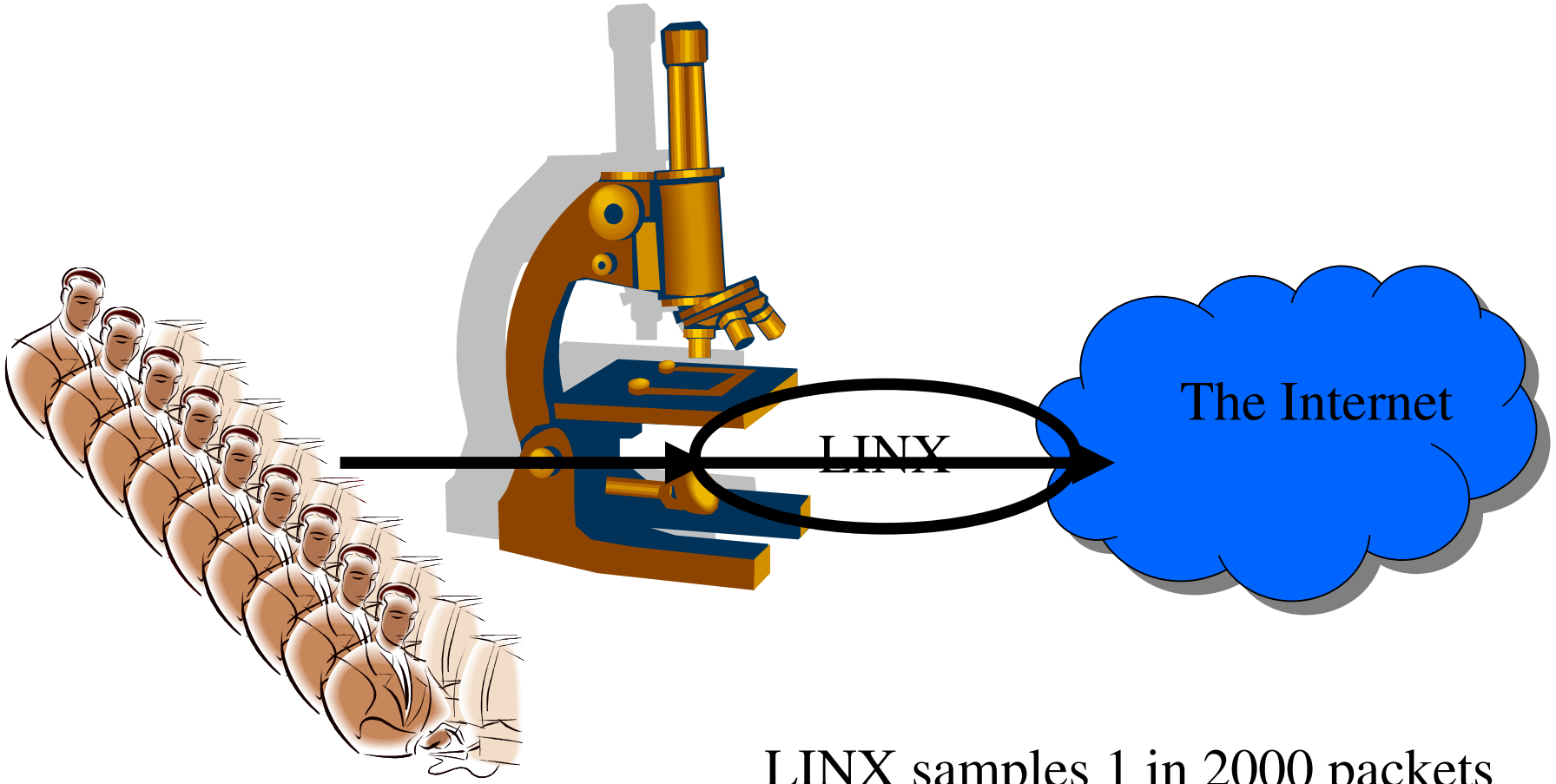
Ratios

- Significantly better than previously reported
  - was circa 1% at time of CEAS 2005
  - now 25% - 50%
  - Main reason is better heuristics (esp HELOs)
- Applying to Demon… we are detecting 20 customers a day, so maybe 40-80 are actually infected at maximum

Suppose All Email is Bad ☹

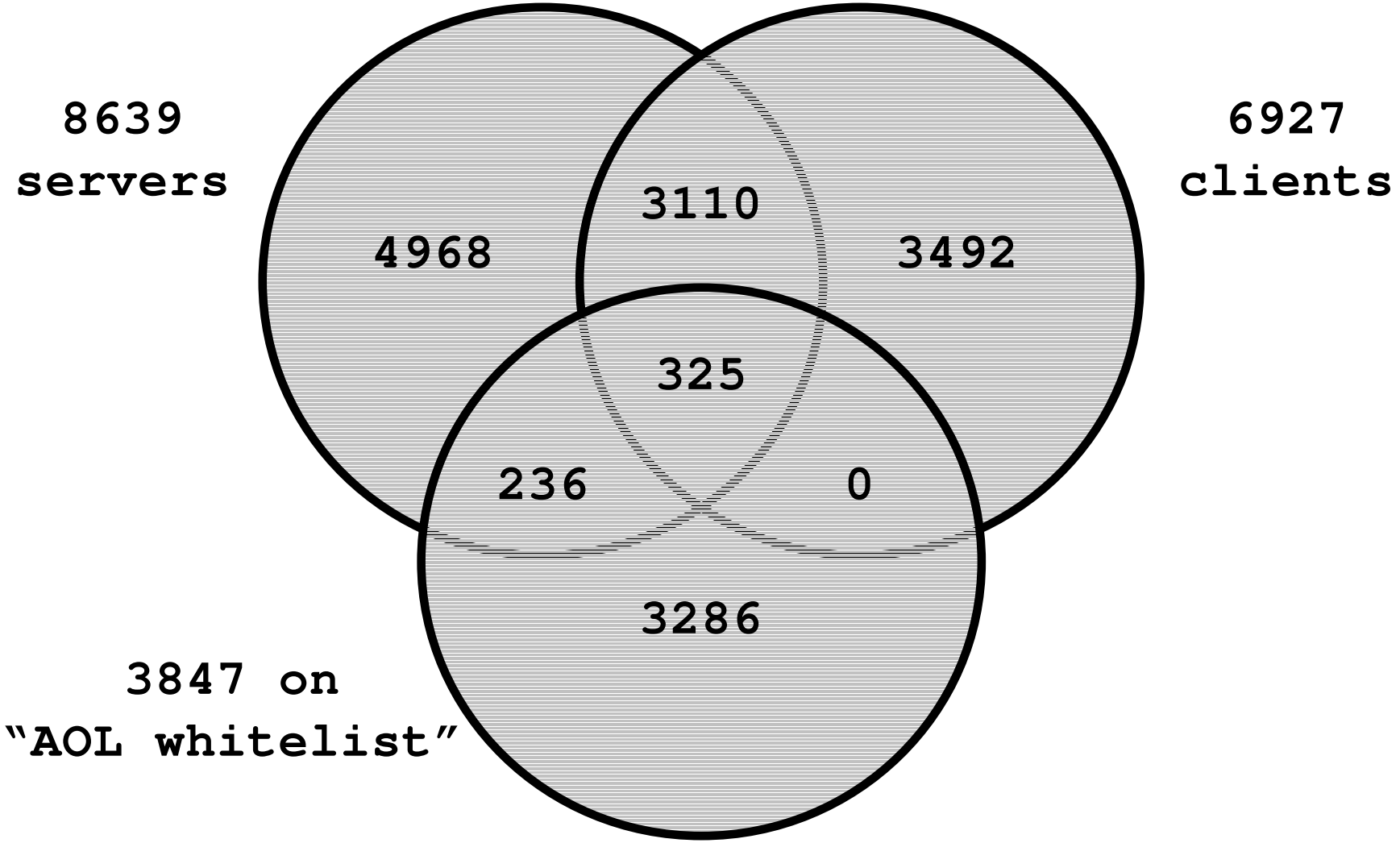
- Typically, remote ASs are sending email from 0.25% … 1.25% of their address space
- Applying this ratio to Demon address space (~200K customers) means 500 to 2500 customers will have a problem and so far we have detected almost none of them ☹

spamHINTS Research Project



LINX samples 1 in 2000 packets (using sFlow) and makes the port 25 traffic available for analysis…

sFlow Results : Demon Customers



Conclusions

- Log processing spots ~20 problems a day
- Remote data suggests 40–80 Demon customers actually have a problem
- Worst case analysis on customer counts suggests 500–2500 with a problem
- sFlow data suggests 3500+ problems
  - but much more work is needed!

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`http://www.cl.cam.ac.uk/~rnc1/earlyResult.pdf`

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