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Maya House
134-138 Borough High Street
London SE1 1LB
United Kingdom

Mr Mattea Fammels
ENISA

By e-mail to economics-nis@enisa.europa.eu

29th May 2008

Dear Sir,

I write on behalf of LINX, the London Internet Exchange, with comments on the report "Security Economics and the Internal Market" (Anderson, Böhm, Clayton and Moore). LINX is an association of over 280 Internet Service Providers and major networks, and is amongst the largest Internet Exchange Points in the world.

We have not used your suggested reply form as these comments are directed to solely to Chapter 7 of the report, and to the pair of recommendations jointly labelled as recommendation 12:

"We recommend that ENISA sponsor research to better understand the effects of IXP failures."

and

"We also recommend they work with telecomms regulators to insist on best practice in IXP peering resilience."

We do not believe the report sets out an adequate evidence basis to support these conclusions.

LINX is a member of Euro-IX, which has also replied to your consultation on this paper. We support and repeat their comments.

As one of the larger IXPs, we would also add that we do not agree with the portrayal of the IXP market as tending towards single operator dominance in a national market. We are very aware that our members always have a choice: to interconnect and peer privately, to buy transit instead of peering, to join other IXPs, and to do all these things in tandem rather than as an exclusive choice.

We are extremely conscious that, especially with respect to the larger networks that are of most interest for critical infrastructure analysis, if we fail to perform networks can readily route traffic over other European IXPs.

From one perspective it could be argued that this shows a healthy level of competition between European IXPs, negating the view in *Security Economics* that the market for IXPs is national rather than pan-European or even broader. From another perspective it could be argued that this simply describes the highly intermeshed nature of the Internet. Either way, the implication in *Security Economics* that the characteristics of the European IXP market gives cause for serious concern its implications for network resilience is shown to be without foundation.

We would also caution ENISA, inasmuch as it may be invited to seek to reshape the market for European electronic communications in the name of improving security and resilience in accordance with the preferences of academic and/or official analysts. We remind ENISA that unless it can be demonstrated that there is a compelling public interest in overriding market outcomes, beyond the private interest of informed market participants, then market forces must be presumed to be best placed to determine the appropriate level of investment in security and resilience. Even where a compelling public interest is demonstrated, any particular proposal must still satisfy a cost-benefit analysis balancing all relevant factors.

For these reasons, and the reasons set out in Euro-IX's letter, we recommend that ENISA does not accept recommendation 12, and remain sceptical of the tenor of the analysis in *Security Economics*. Instead, LINX would be very happy to meet with ENISA officials to help develop ENISA's understanding of our role as part of your ordinary activities.

If you would like us to develop these points further, or if I can be of any assistance in any other way, please do not hesitate to contact me.

Yours faithfully,

Malcolm Hatty
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