Information Processes and Threats in Social Networks. A Case Study.

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“Modelling & Control of Information Processes”

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ICT Infrastructure Threats
Why to Address Social Networks?
Methodology of the Study
The Model
Future Work
FORWARD is an initiative by the European Commission (under FP7) to promote the collaboration and partnership between Academia and Industry in their common goal of protecting Information and Communication Technology (ICT) infrastructures.

**Basic Result:**

**FORWARD WHITEBOOK: “EMERGING ICT THREATS”**

What to address today in cyber security?

Building Capabilities in All These !!!
## Possible Cyber Threats

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<th>Threat Description</th>
<th>High Priority</th>
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<td>New vectors to reach victims</td>
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<tr>
<td>#</td>
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<td>IPv6 and direct reachability of hosts</td>
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Why to Address Social Networks?
“...The Web will be understood not as screenfuls of text and graphics but as a transport mechanism, the ether through which interactivity happens...”

DiNucci, 1999
Our Case Study

Would you like to use Facebook in Български?
Facebook is available in 76 languages. Click here to switch to Български.

News Feed

ACT's Contribution to Bulgaria's Phoenix 2010
Talking about next year's "Energy Flame" iteration in Bulgaria, and our linkages with the UK's Defence Science and Technology Laboratory with General Consul Jon O'Shaughnessy.

ACT personnel hard at work

Todor Tashev is at SF International Auto Show with Yentsi Gaydardzhiev and 2 other people.

Maha Bakat
1 more
Maha needs help to complete an important mission and earn rewards!
Maha needs help to finish the Transport Stolen Uranium mission. He is looking for 6 friends to help out!

Holly Kennedy
I am so fed up with Internet Explorer & Zynga. I wish they would play nice together. You'd think two such popular, widely used programs would work together. So tired of "not responding" every single time I try to get on Farmville. I can't even get to FV Help. = ( scolllkkk — Thanks for reading this little vent. You know I hardly even complain about anything, but really...
about an hour ago · Like · Comment · Help Maha
A map of the World, showing the most popular social networks by country, according to Alexa & Google Trends for Websites traffic data (June, 2010).
Methodology of the Study

System Analysis

- Intuitive entity-relationship notation;
- Details’ consideration in I-SCIP*;
- Familiar to the scientific world for more than half a century.

Why to use modelling in the digital world and are there any limits?

The Universe of Physical Realities

Observations
Validation
Theory/Mathematical Models
Verification
Computational Models

Knowledge
Decision

Observation Errors
Modelling Errors
Discretization Errors

After Oden, Moser & Ghattas “Computer Predictions with Quantified Uncertainty”, SIAM NEWS, November 12, 2010
Results of Sensitivity Analysis
Future Work

“A European Network of Excellence in Managing Threats and Vulnerabilities in the Future Internet: Europe for the World”,

EU FP7

SySSec 2010 -2014

http://www.syssec-project.eu/

... Instead of reactively chasing after attackers, we should start working proactively and think about emerging threats and vulnerabilities...
The Consortia

Industry

Academia

Other Stakeholders

Center of Research Excellence

Center of Academic Excellence (Education)

SysSec Community
Participating Countries & Industry

- Italy
- Netherland
- Greece
- Turkey
- Sweden
- Bulgaria
- France
- Symantec
- F-Secure
- Orange
- Hispasec
- Google
- AT&T
- Microsoft
- Panda
- SysSec Europe
THANK YOU FOR THE ATTENTION!