

Preserve the digital ecosystem!

By Cid Torquato

In the “real world,” as we say in the dotcom era, there will be two basic macroecological concerns over the years to come: global warming, and a shortage of water. These are frightening questions in which humanity will have to evolve in order to adequately respond to them.

For the “virtual world” – the world wide web, this increasingly



Photo: Eduardo de Sousa

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connected, interactive and real time market –, the need to preserve the digital ecosystem is just as or even more vital than the physical environment, although at first view, the latter would seem to be far more catastrophic.

Today, all the infrastructure and basic public services are managed and controlled, if not also made available, through systems based on information technologies. It is not by coincidence that the hawk of US militarism, Defense Secretary Donald Rumsfeld, insists on expanding investments in technology to combat wars that will increasingly be fought in cyberspace.

The shortcomings of analog equipment are perfected in the digital universe. Moore became law when predicting that computers would double their performance every 18 months. Which is in tune with Metcalf, for whom value is created exponentially each time someone is connected to the network. All these exponents, however, also confer great fragility to the entire system.

Preserving the digital ecosystem means, before anything else, changing established paradigms on security and who is responsible for it. In the network world, the user is not hyposufficient like an ordinary consumer; each terminal is a point of systemic vulnerability, and promoting community safety is the responsibility and duty of every one involved.

As with lawful activities, the Internet is also the best means of communicating – and more efficient, transparent, productive and competitive – for illegal, immoral or unethical elements. Spam, fraud, embezzlement, smuggling, withholding, pedophilia,

appropriation, theft and violation of privacy, intellectual property and image rights are just some of the serious problems that need to be electronically handcuffed. Those more connected are already guarding against nothing more, nothing less than cyberterrorism, which, if attaining infrastructures and essential services, can be even more devastating than natural catastrophes. Expertise and technologies in preventive security, ergonomics, tracking and computer forensics have improved tremendously, but there will always be the challenge of preparing for new attacks and new techniques. It should be remembered that the power available to those with bad intentions is enormous, combining automation, long-distance action and real-time dissemination, with the added difficulty that many countries still do not have the coercive capacity to inhibit and to punish grave infractions.

What can be done about such a thorny issue? It won't be easy. There are several fronts of action. One of them, certainly, is to redefine the institutions and mechanisms that govern the network, which are today at an impasse – in both Brazil and around the world – over the system implemented by the US-based NGO ICANN. But perhaps the most important is to expand education and awareness of the theme, demonstrating to the rest of society that the above questions, especially the security and privacy of data, do not only concern large institutions and internet users, but anyone who uses a telephone, cell phone, financial services, credit cards and, direct or indirectly, public services in general. And that is an *erga hominis* question: Preserve the digital ecosystem! 