



Connecting the next billion devices

Adam Dunkels, PhD,

Joakim Eriksson, Niclas Finne, Fredrik Österlind,
Nicolas Tsiftes, Dogan Yazar (SICS)
Julien Abeille, Mathilde Durvy (Cisco)

adam@sics.se



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Online Gizmos Could Top 50 Billion in 2020

A senior executive from mobile giant Ericsson says that in 10 years the "Internet of Things" could connect tens of billions of devices wirelessly

By [Natasha Lomas](#)



Fifty billion connected devices are coming to cellular networks in the next decade, according to Ericsson—as everyday objects go mobile.

Ericsson's VP of systems architecture, Håkan Djuphammar, predicted the years to come could see connectivity spread to

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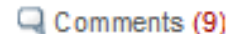
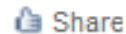
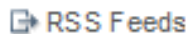
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Monday, May 18, 2009

Cisco: Smart grid will be 1,000 times size of the Internet

San Francisco Business Times

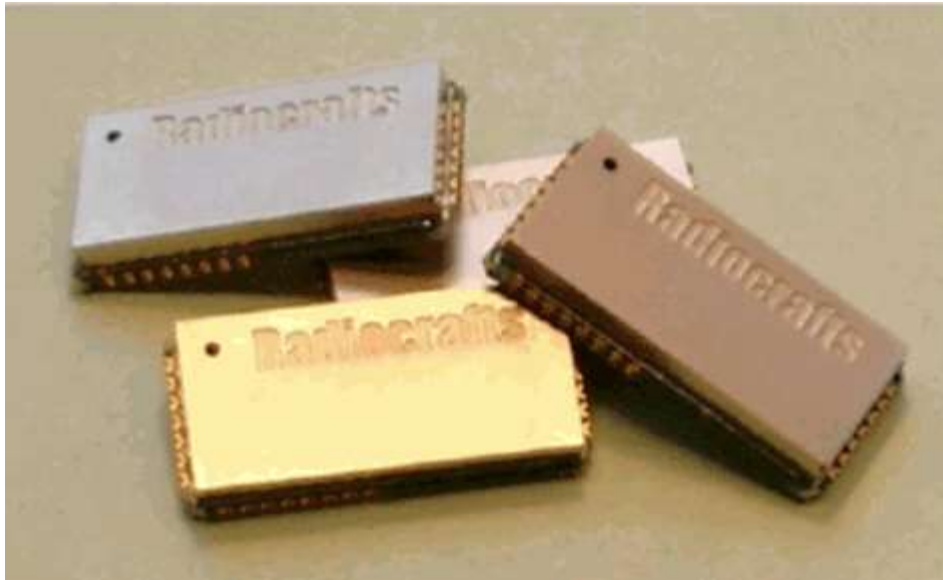


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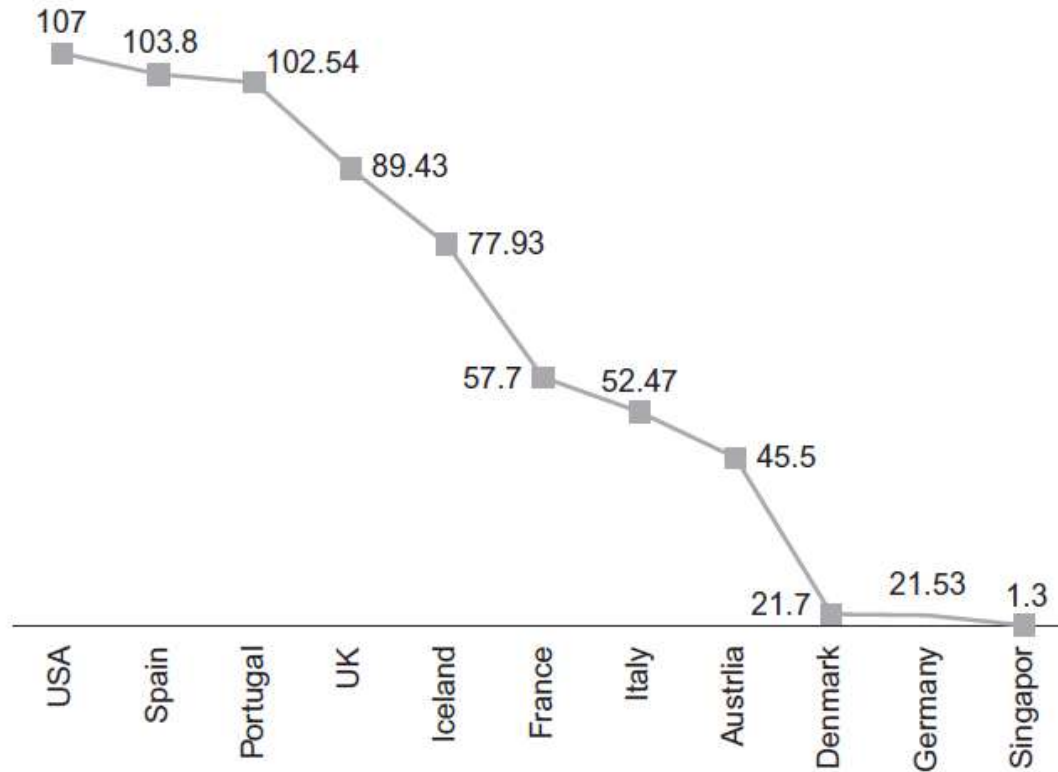
Cisco Systems sees a \$100 billion opportunity in communications equipment for upgrading aging electrical infrastructure to a digital smart grid, CNET reports.



The Smart Grid



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What is needed?

- Low-power protocols
- Scalable protocols
- Low-power software
- Leverage the Internet, Web 2.0, the cloud
- Leverage existing developers
- Giving developers the opportunity to get to the data

An operating system for the planet



Making this happen: Contiki

- Sub-milliwatt radio communication
- The Internet Protocol
 - IPv6
- Low-power routing
- Integration with existing tools – the Internet, the Web, the cloud



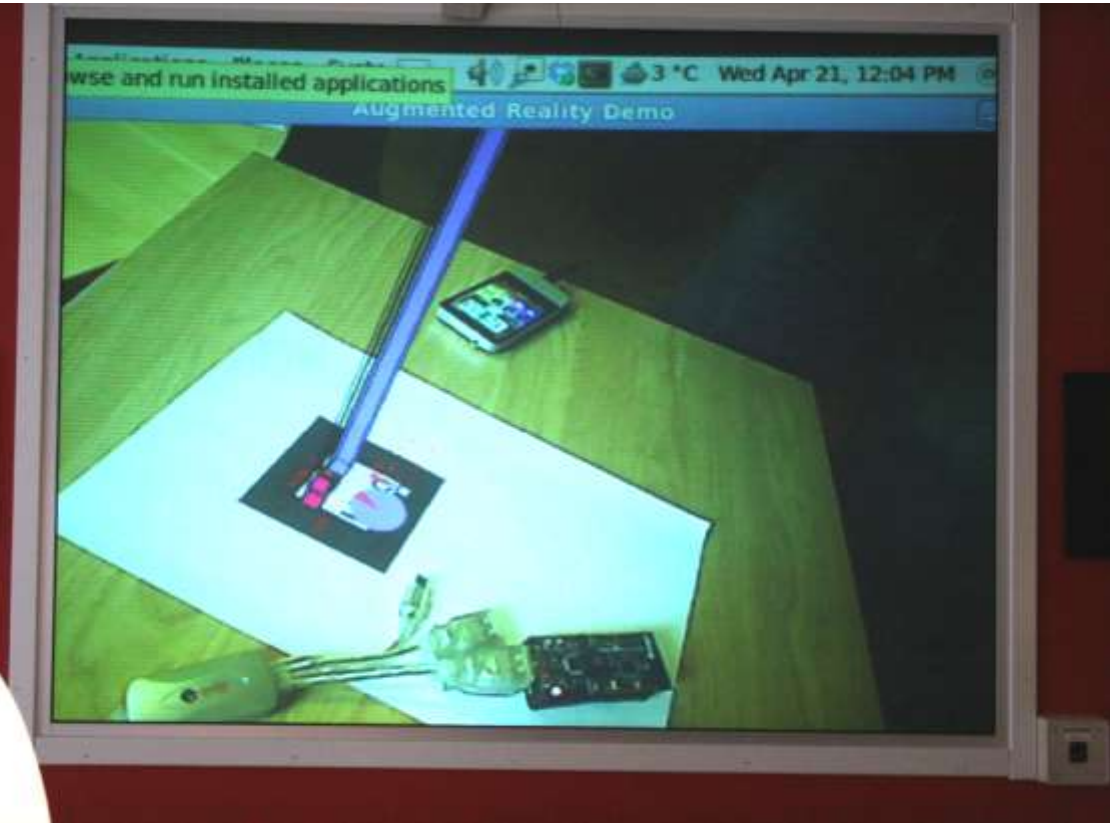
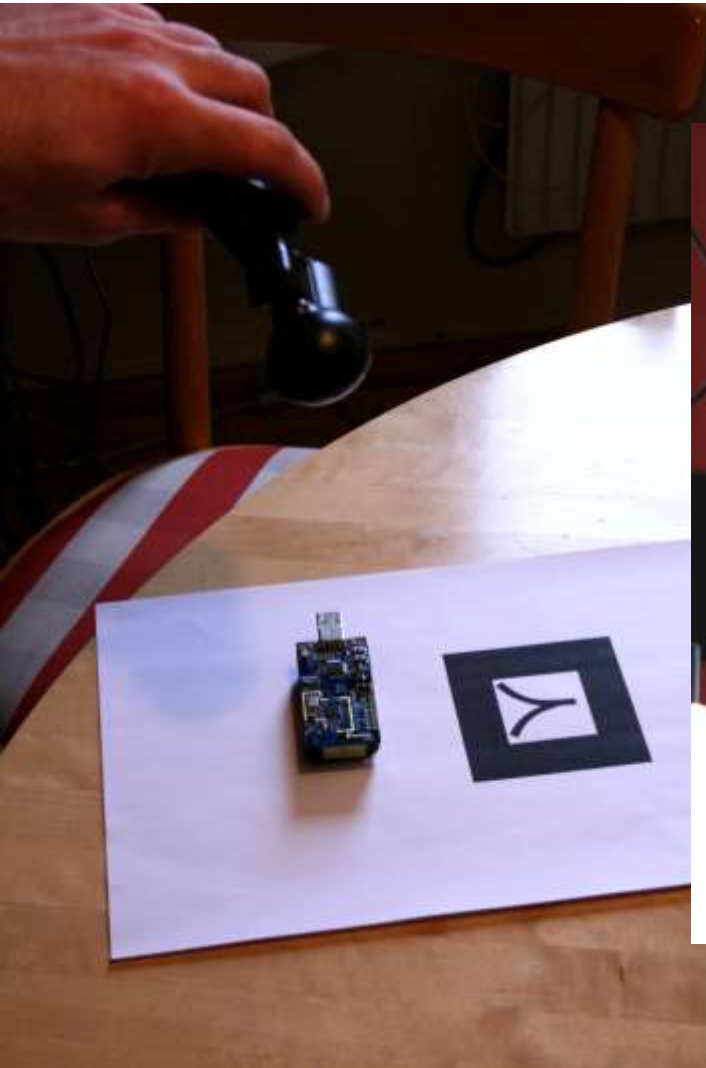
IP for Smart Objects Alliance



Demo: IPv6 and ContikiRPL for Smart Energy Management



Demo: Augmenting reality with IP-based sensor networks



Conclusions

- Connecting the next billion devices
- Contiki: low-power IPv6
- An operating system for the planet
- Allowing the future to evolve

Thank You

The Contiki Operating System

<http://www.sics.se/contiki/>

Vasseur & Dunkels,
Interconnecting Smart Objects
with IP – the Next Internet

Published in July 2010

<http://TheNextInternet.org>

The screenshot shows the Contiki website homepage. At the top, it says "Contiki A Memory-Efficient Operating System for Embedded Smart Objects". The page is divided into several sections: a left sidebar with navigation links like "Home", "About Contiki", and "Download"; a main content area with a news article titled "New Industry Alliance Promotes the use of IP in Networks of Smart Objects" written by Adam Dunkels; and a right sidebar with "Current Events" and "Recent Popular Articles". There is also a logo for "IPSO Alliance" (Internet Protocol Smart Objects).

The screenshot shows an Amazon.com product page for the book "Interconnecting Smart Objects with IP: The Next Internet (Paperback)" by Jean-Philippe Vasseur and Adam Dunkels. The page includes the Amazon logo, search bar, and navigation links. The product details show a price of \$64.56, a "Pre-order" status, and a "Pre-order Price Guarantee". There are also sections for "Frequently Bought Together" and "Special Offers and Product Promotions".