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The Newsletter spans history of Internet of Things from the ...

OT DAY. APRIL 9 Just before the perfect storm. 1.

Rob van Kranenburg Chief Innovation Officer, asvin.io June 12, 2024

born as it were in industrial settings, programmed by single purpose led engineers,

connectivity (by devices with sensing capabilities). It is quite unprecedented that

such an ontological shift has occurred in such short amount of time. The shift is

ontological because up until this Internet of Things the world could be divided into

subjects and objects. Subjects being living creatures with forecasting abilities and

and built for either passive (to be read by radio equipped devices) or active

Open Immersive Reader In under twenty-five years billions of devices have entered the world. They were

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objects were dumb constellations of various matter to be handled and given meaning by subjects. All was quite naturally well; things were logical and clear. Until the Internet of Things came along, and no one so it coming. No one? Well, a small group of unaligned individuals did, including me. This is a reflection on a twenty-five-year-old journey. The timing is important. Reality is no longer understood as being divided in subjects and objects, but also the real and the virtual become contested. The situation has become hybrid and as such it can no longer be understood nor governed by a perspective that presupposes an unproblematic relationship between the real and the virtual. We need to build new tools from the perspective of the hybrid as the new given. The tools themselves need to be tuned to this situation. This transition will not happen by itself, it needs to be guided. This requires a societal time out during which new mechanisms to make decisions at local, national and supra national level can be developed and discussed. In this Newsletter I propose to hardcode this time out in the shape of an open-source platform – a phone – that mediates the trajectory of the past twentyfive, thirty years. Too long the digital trends have been thought to be unequivocally linked to the agendas of large commercial consortia. These have taken over the very imaginary of building (positive) futures for the world. It is time to reclaim that imaginary for a public positive project and the way to do that is by taking control of the narrative. **IoT Council: Three Questions On IoT: Karmen Franinovic** When did you hear first of IoT? In what context was that? Difficult one! I think it was in 2002 in Ivrea - but we used the term connected things (more than 2 things;), not sure about ItO. I remember brainstorming ideas

tangible and embodied interfaces integrated in and distributed across the environment. Responsive Environments was a more interesting term to me at the moment (remember Riga symposium?) and projects like those from FoAM where

Did you think it was something big then or just another technology?

about distributed urban lighting in my first day in Ivrea, so the infrastructural part

was there as well. But Victor Vina's Boxes were a nice example that was already

working when I got there. Also some stuff at the Disappearing Computer EC

I was an architect coming to study in Ivrea in 2002, and totally in love with the

Yon Visell programmed behaviour of the space using Hidden Markov models. Also.

FUTURE. YOUNG AND NAIVE WE WERE...

initiative.

Santucci

inventory tracking solution.

be? I hoped it would revitalise and democratise the use of public space, make strangers connect in physical settings, reduce neoliberal presence in public areas. THINGS WENT THE EXACT OPPOSITE DIRECTION – I REMEMBER IN IVREA SOMEONE MAKING A VIDEO OF EVERYONE STARING AT THEIR PHONES IN THE BUS AND NOT TALKING TO EACH OTHER.

WE ALL LAUGHED, THINKING OUR VISIONS WOULD BE THE

What were your dreams, hopes for it once you realised how big it was going to



phrase "Internet of Things" in 1999, while making a presentation for Procter &

Gamble – he believed RFID was a prerequisite for the Internet of Things as an

Few of my colleagues at DG INFSO believed that "IoT" was a real phenomenon -

they felt that the phrase was just an unrealistic and useless metaphor, and they

Advisory Board of the Fifth Framework Programme (1998-2002) and the Sixth

Framework Programme (2002-2006) as a way to promote a vision of consumer

My work on RFID played an essential role in the popularization of IoT in DG INFSO.

A bit against the wish of the Directorate General's hierarchy, Mrs. Viviane Reding,

electronics, telecommunications and computing. Ducatel's report was titled

"Scenarios for Ambient Intelligence in 2010".

Ken Ducatel, on the basis of work done at Philips, and heralded by the IST

preferred to use the phrase "Ambient Intelligence" (AmI), coined by my colleague

then Commissioner for Information Society and Media, followed my advice to launch a series of workshops and public consultations on RFID. The announcement took place officially on 9 March 2006 and led to an EC Communication on 15 March 2007, in which the final paragraph was the following: "The Commission will continue to closely monitor the move towards the "Internet

of Things", of which RFID is expected to be an important element. At the end of

effects of these developments, with particular attention to the issues of privacy,

necessary to propose further legislative steps to both safeguard data protection

trust and governance. It will assess policy options, including whether it is

After the adoption of the RFID Communication, I took a series of ambitious

initiatives, including three EU Presidency conferences on the Internet of Things

(Berlin, June 2007, Lisbon, November 2007, and Nice, October 2008), a public

and privacy and address other public policy objectives."

2008, the Commission will publish a Communication analyzing the nature and the

European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on "Internet of Things: an action plan for Europe" on 18 June 2009 (COM(2009) 278 final). In the meanwhile, I had read the UN/ITU report on IoT, released in 2005 by a dynamic international team led by Mrs. Lara Srivastava, which had a strong impact on my commitment to pursuing discussions and designing EU actions on IoT. Did you think it was big then or just another technology?

My intuition in 2004/2005 was that RFID, which kept me busy as Head of Unit at

DG INFSO during 5 years (2005-2009), was just the doorstep and threshold to

something "big" named the "Internet of Things". I always thought it would be not

applications, and human-object relationships. I was impressed by the work of

To make a shortcut, my conviction then was that the "Internet of Things" would not

only develop and thrive as a complement to the initial "Internet of People", but that

it would lead to a metamorphosis of objects, and hence a new understanding by

humans of the meaning of their existence. For me, the Internet of Things reflected,

as I wrote at that time, the commitment of policy-makers from industry and

governments in the EU to accept and promote a new spirit – a new sense of

community, a new willingness and commitment to develop digital systems and

democratic societies to seize the full advantages of the ongoing technological

What were your dreams, hopes for it once you realized how big it was going to

I considered first of all the risks of IoT for humans and society. Though covering a

privacy and security. This concern led to the introduction of "IoT ethics" as part of

I also encouraged the group to discuss the relevance and feasibility of a new right,

actually the "right to the silence of the chip", but the idea was dismissed by its

majority. Then - poetic return of time? - thanks to my close collaboration with

what was at that time DG MARKT and DG ENTR, the concept came back, slightly

broad scope of topics, my initial work on RFID was focused on data protection,

Recommendation in 2010/2012 – by the way, it was the first time "ethics" was

the discussions within the RFID Expert Group that worked on an IoT

given such an important place in EC's reflections on digital tech.

just another Internet technology but actually a deep revolution in tech,

thought-leaders like Bruce Sterling and Julian Bleecker who presented

complementary clear and thrilling visions of the IoT.

revolution.

be?

applications for more sustainable growth and better quality of life, a new understanding that citizens and groups are all in this together, also a new recognition of the helpful role of the European Commission in guiding and driving the necessary R&I efforts, and finally a new readiness on the part of our

nuanced, in the 2016 General Data Protection Regulation (GDPR) under the concept of the "right to be forgotten". So, to some extent, work on a doomed IoT Recommendation influenced the way the GDPR was designed, drafted and negotiated. Rapidly, I became convinced that IoT was a formidable opportunity for the EU economy, the EU society, and later for the planet as a whole (impact on climate, nature, environment, medicine...). The internet's penetration of the real/physical world would mean that relations among individuals, entities and societies would increasingly be embedded in the IoT. I remember the essential role Chinese Premier Wen Jiabao played for the development of the IoT when on 7 August 2009 he made a speech in the city of

Wuxi calling for the rapid development of Internet of Things technologies. It

included an "equation", which reflected nicely the vision of IoT I had at that

time: Internet + Internet of Things = Wisdom of the Earth. Wen Jiabo followed up

with a speech on 3 November of the same year at the Great Hall of the People in

I think it's important to recall this short history in order to realize that Europe was

first in promoting the IoT, followed by China, while at that time the United States

were more focused on smart dust or sensor networks. The way you name your

Unfortunately, in less that 5 years Europe lost its momentum and the pole position

it held during a short moment in the IoT global race. The same happened more

competition, sustainable growth, mitigation of global risks, and technological

sovereignty – 5G, Metaverse and Artificial Intelligence. Incidentally, I have the

now dying down in favor of the IoT – back to the future!

feeling that the hype and hope over the last few years of 5G, Metaverse and AI are

recently with other technologies, which today are considered essential for global

initiatives and endeavors tells much about the vision you have of the future.

Beijing, in which he encouraged breakthroughs in key technologies for sensor

networks and the Internet of Things.

Like most new technologies IoT has an ambivalent dimension - in fact the good or bad coming from it depends on what humans actually do! After 2012/2013, while busy with other roles at DG CNECT, I decided to continue to get involved in IoT thinking and developments and I strived to balance my own reflections in a way to consider both the opportunities (incl. for industry and the European economy) and the potential threats/risks (for individuals, communities, nature, the planet). The IoT Council banner – "IoT for Good" – is indeed the very engine of my efforts on this.

Finally, I would like to add one thought. If the phrase "Internet of Things" was

ripples of what became IoT were embodied in the concepts of "Real-time

coined in 1999, its roots lie in various original research works, and for me the first

Operating system Nucleus" or TRON (Dr Ken Sakamura, 1984), "Ubiquitous – or

Pervasive - Computing" (Mark Weiser, 1988), "Ambient Intelligence" (Philips and

DG INFSO, 1999), and some others (Cyber Physical Systems etc.). No doubt

everyone has his/her own ideas about the origins of the Internet of Things, but

what is interesting is, for me, to remember and understand the history of how new

concepts are named – for example, AmI had little success beyond the academic

community, whereas IoT, first ill-considered by academics and engineers, quickly

became a political and media catchword that ensured its long-term success.

I bet the IoT saga is just beginning.

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Welcome to the first weekly Newsletter on the perfect storm that is IoT and AI. We look at the history of the

Phone Screenshot SkySpark Analytics-to-Action Cycle hyperchair Tagging Visualization IoT - Google Search google.com Like · 🖒 2 Reply 2d ••• Ravi Chivukula • 1st Co-Founder at HeARTHealth Technologies Yes, the IoT saga is just about beginning! - Having deployed SCADA++ in large integrated steel plants in engineering, erection and commissioning in the 1980's onwards (sandbox?), internet scale deployments at price points that homes, municipalities, ..., can deploy for "ambient intelligence" is feasible today. The Rol is "sustainability"? Like · (2) 1 | Reply **Show 1 more comment**

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consultation on a Commission Staff Working Document on the Internet of Things (from 29 September to 28 November 2008), and finally a Communication to the