CWTe Research Retreat 2014

Peter Baltus

Wednesday, October 22nd 2014

CWTe
Centre for Wireless Technology Eindhoven

TU/e Technische Universiteit Eindhoven University of Technology

Where innovation starts

OMER.

TRADITIONAL BLOND

Movies

oktober 2014

The Wind Rises

- ma. 13 okt.
- di. 14 okt.
- wo. 15 okt.

Blue Ruin

- ma. 20 okt.
- di. 21 okt.
- wo. 22 okt.

Boyhood

- ma 27 okt.
- di 28 okt.
- wo 29 okt.

Welcome!

To the 5th CWTe Research Retreat!

Full program:

- **3 Invited Presentations: Industry, AT, TUDelft**
- **4 Presentations from CWTe researchers**
- **20 Posters**
- **2 Breaks**
- **1 Lunch**
- ***n* Drinks**

Technische Universiteit Eindhoven University of Technology

CWTe
Centre for Wireless Technology Eindhoven

Invitation
CWTe 2014 Research Retreat

Wednesday, 22nd of October 2014
De Zwarte Doos, 1st floor, TU Eindhoven

Hosted by: Centre for Wireless Technology Eindhoven

9.15	- Welcome with coffee	
	Morning program	
9.45	Opening and introduction	Peter Baltus (TU/e, CWTe)
9.55	Cognitive Radio & Conscious Behavior; the New Network Philosophy	René Vroom (Agentschap Telecom)
10.40	"Fixed Freq. Oscillator" Novel Approach to Transceiver Architecture Design	Kave Kianush (Catena)
11.25	- Break (incl. posters)	
11.45	Perspectives on 5G	Ignas Niemegeers (TU/e)
	Lunch	
12.30	- Lunch (incl. posters)	
	Afternoon program	
13.30	Current THz Research and Perspectives to the Industry	Aurèle Adam (TU Delft)
14.15	Antenna Design for 60 GHz Radar Applications	Bedilu Adela (TU/e)
14.45	- Break (incl. posters)	
15.05	Laboratory System for THz Imaging Spectroscopy of Tissue Samples	Juan Alfaro (TU/e)
15.35	Robust 3D Sensor Cloud Localization from Ultrasound Range Measurem.	Gijs Dubbelman (TU/e)
	Closing	
16.05	Closing session	Peter Baltus (TU/e, CWTe)
16.30	- Drinks and networking	

For registration: click here

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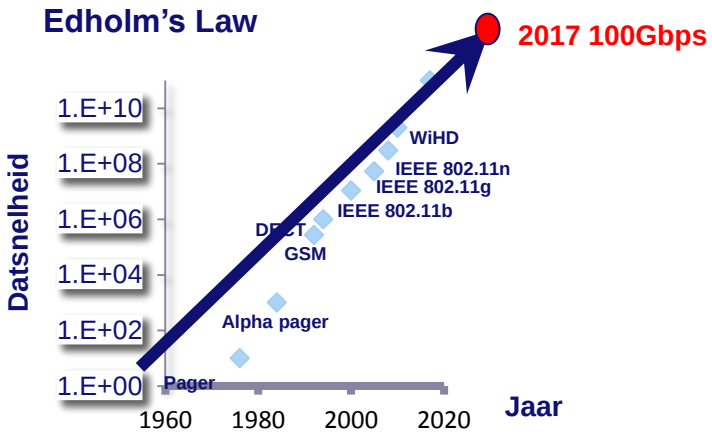
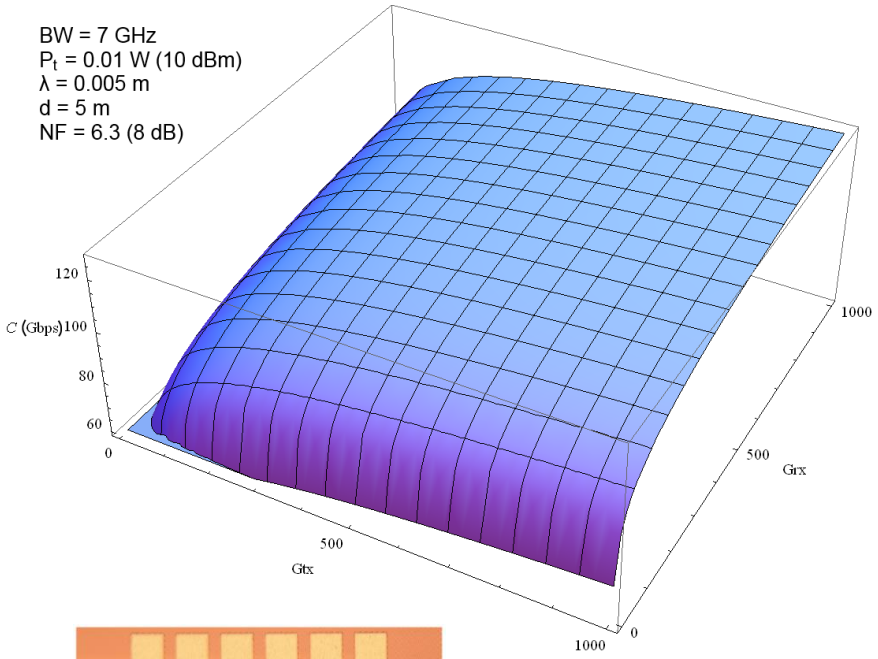
Status

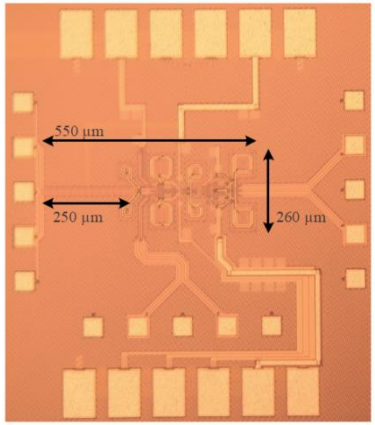
- Started in 2007
- 3 Programs & roadmaps
- 2 Programs started in 2007
  - UHDR
  - ULP
- 1 Program started recently:
  - SRTO

UHDR Vision & Roadmap: 100Gbps wireless link in 2017





Components explored & verified
System investigated
Towards implementation & verification



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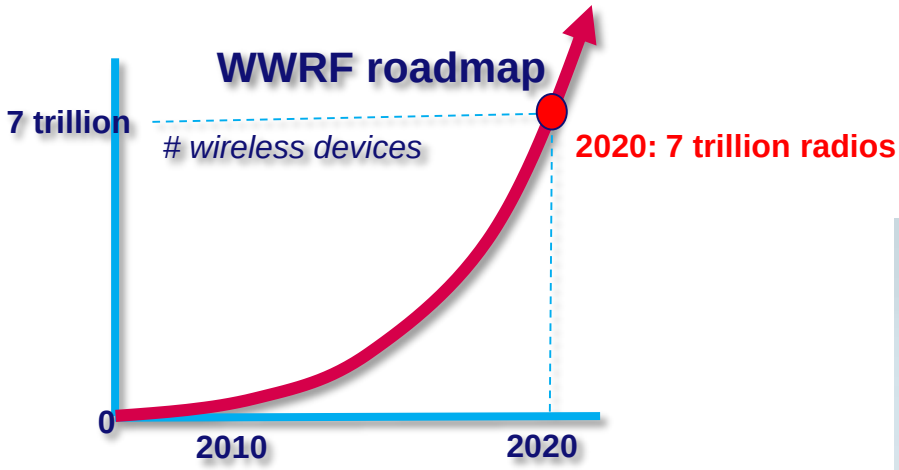
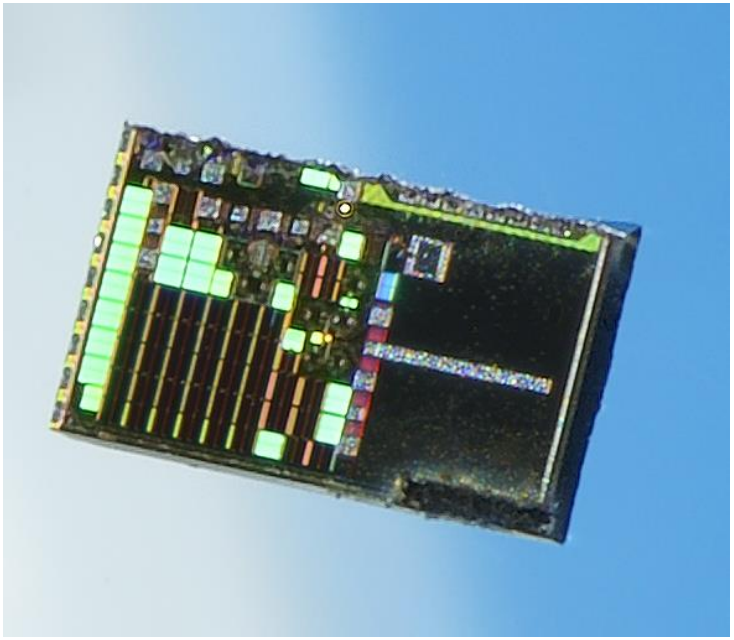
ULP Vision & Roadmap: Battery-Less Wireless Sensor in 2017





Worlds' first true "Electronic Dust"
0.2mm^3, 1.6mg Wireless Temp sensor

Now investigating spin-off applications

TU/e Technische Universiteit Eindhoven University of Technology

Next steps

Approach has worked well

- **Provided focus**
- **World-class results with limited resources**

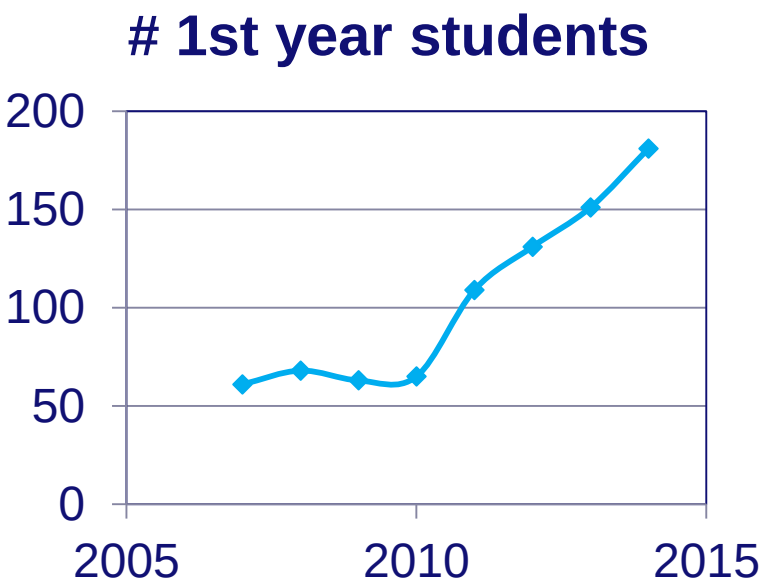
Next steps:

- **Start working on vision & roadmap for next 10 years**
- **Interested in your input & discussions!**

Education

- Very strong growth in freshmen since 2010
- Will start to result in more graduates from ~ 2016
- FLUX is already too small!
- BSc college
- Graduate school
- Connected World track

- Starting development on Wireless Architect



So…

- A lot of exciting developments
  - In the world
  - At the university
  - In CWTe
- A very interesting program today
- Enjoy the show!