State of the art and pipeline technologies



Networked Standby Data Collection Methodology and Policy Development Workshop

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For Danish Energy Agency

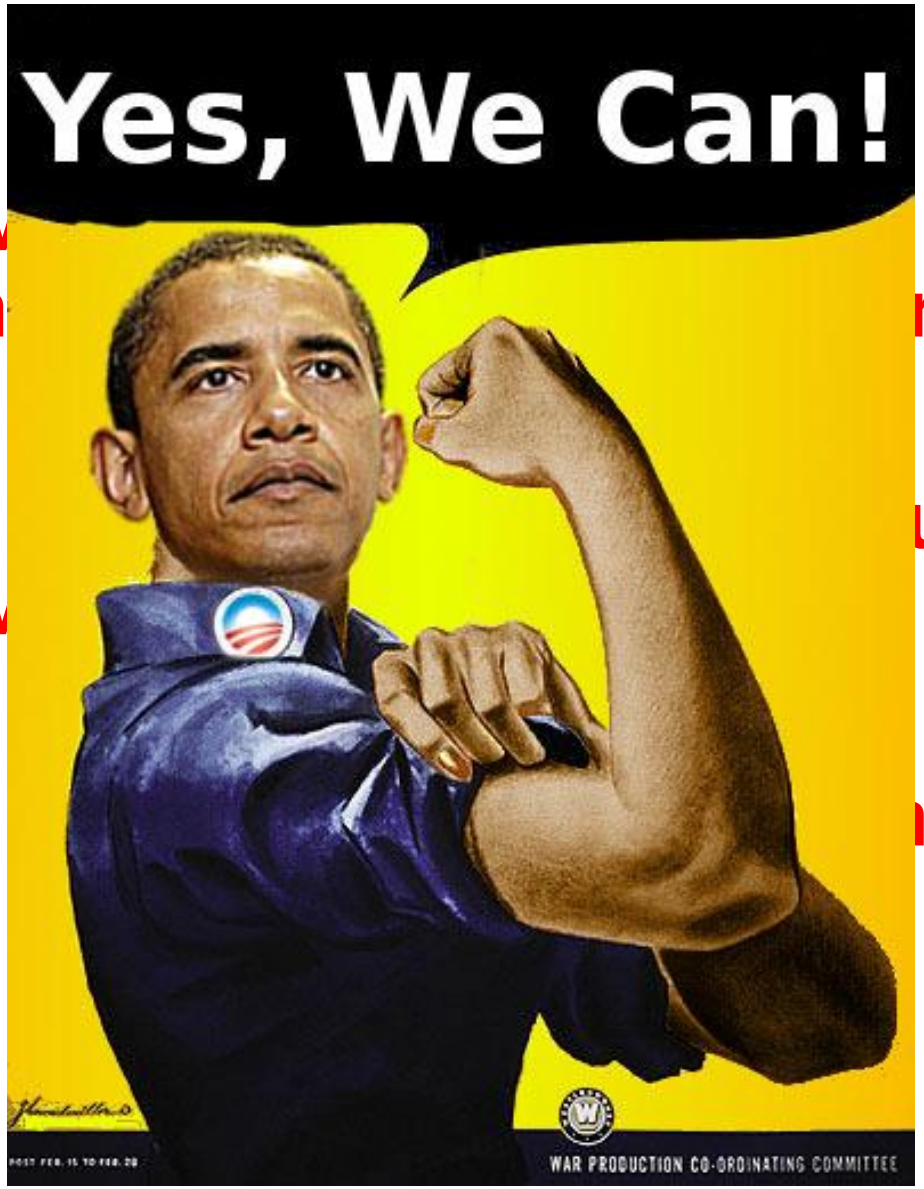
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When should the technologies be ready?

- Should we know the technical solutions before we set the target?
- How close to the technical solutions should we be?
- Or should we set the target and just say ....?

When should the technologies be ready?

- Should w
  solution rget?
- How clo utions
  should w
- Or shou d just
  say ….?



The Mobile Telephone - Example iPhone 4

Standby power consumption on network

0.024 W

Internet use on Wi-Fi

0.71 W



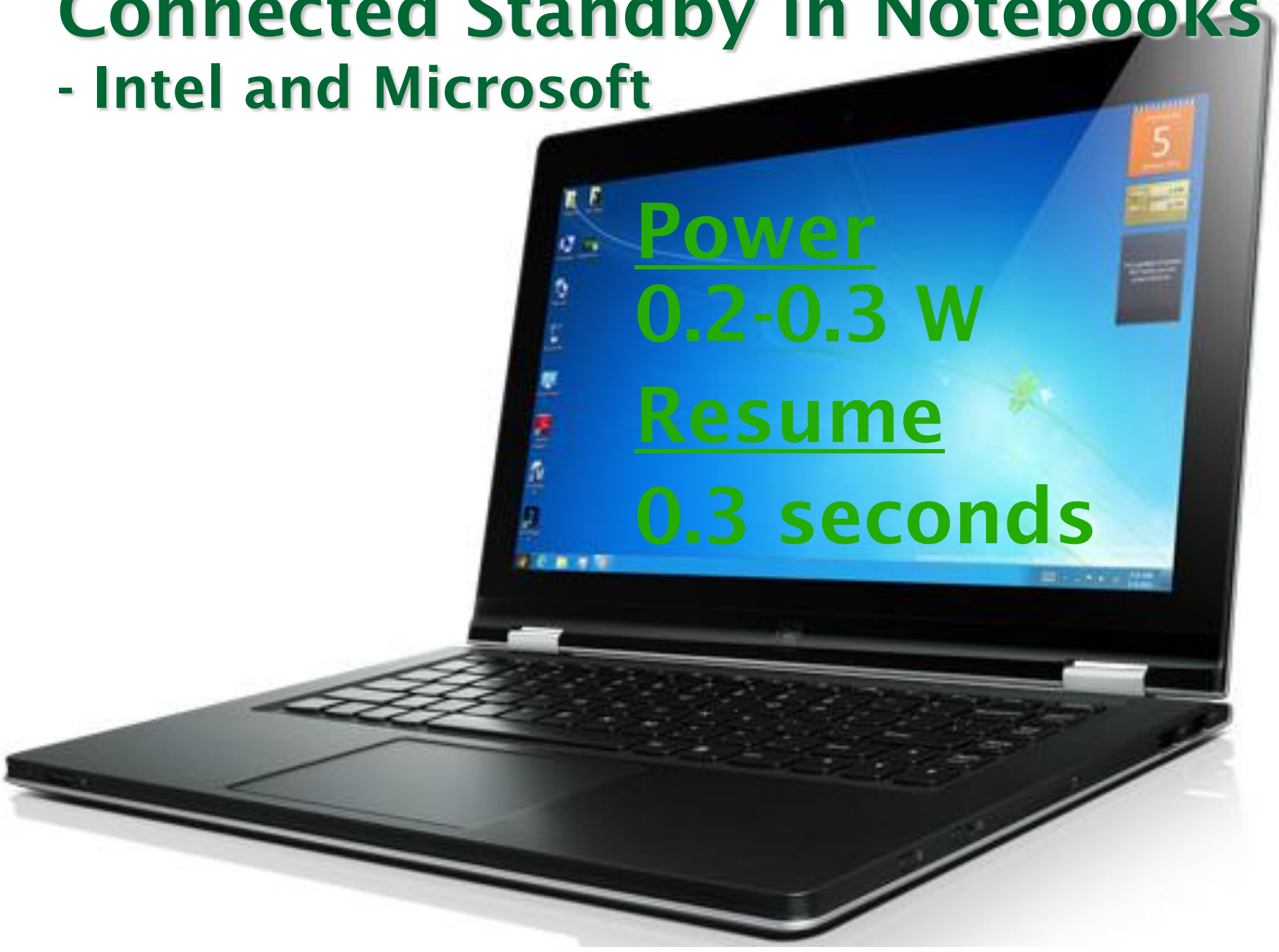
Assumptions:

- According to technical data = Best conditions
- Standby time: Up to 300 hours
- Internet use: Up to 10 hours on Wi-Fi
- Battery capacity 1420 mAh, 5 V

Connected Standby in Notebooks
- Intel and Microsoft



Connected Standby in Notebooks
- Intel and Microsoft



Technologies for Low Consumption

How much of the products should we look at?

1: Full product

2: Network interface

1 and 2 – Depend on resume time



Resume time
1 second?

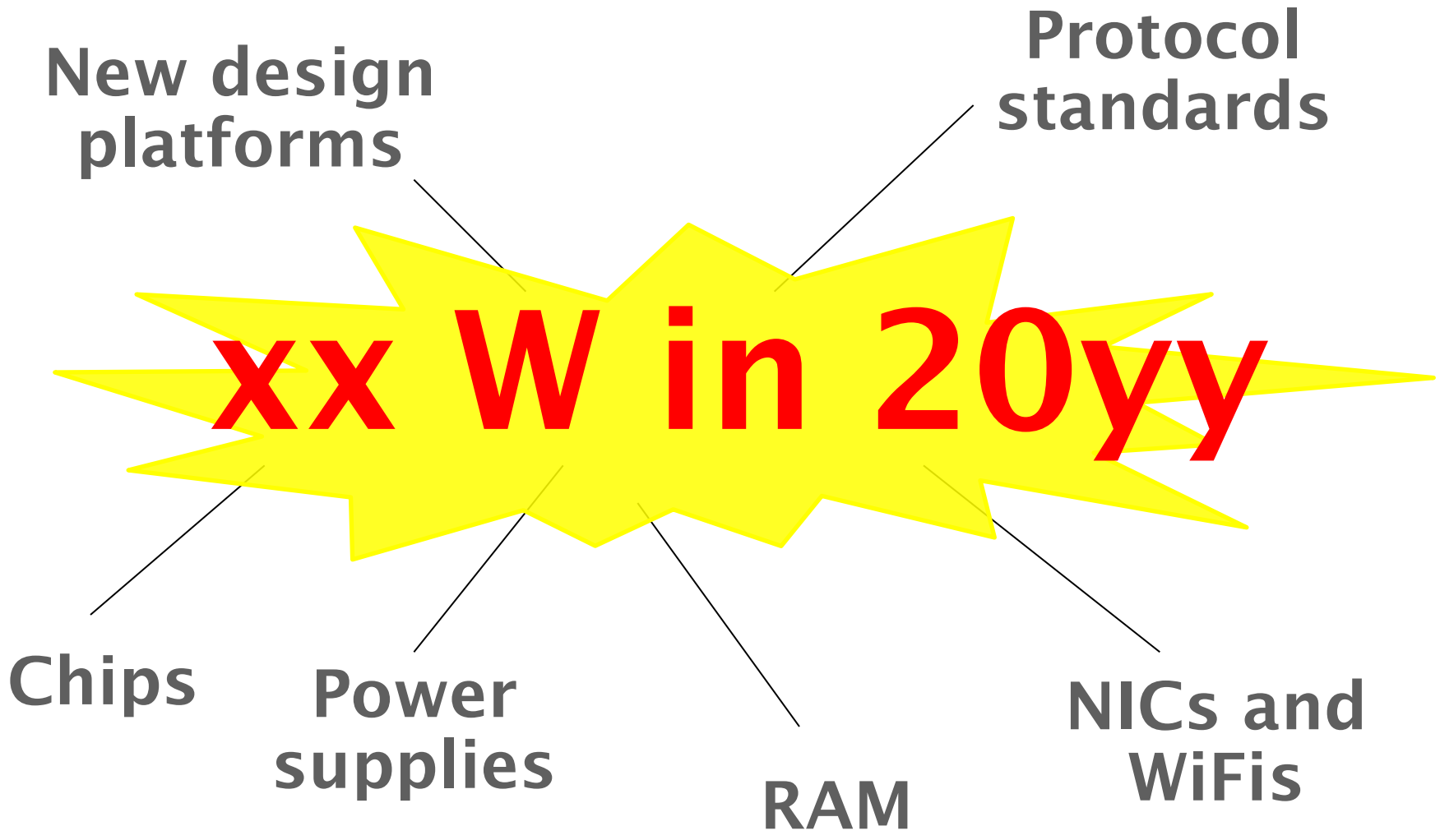


Resume time
1 minute?

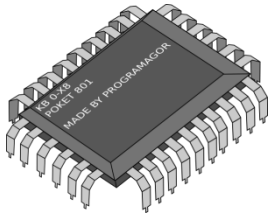


Resume time?

To Reach the Target



Power Saving Options



Only power for needed circuits
Power and frequency adaption



Auxiliary power supply



Auxiliary RAM for quick start up



Frequency adaption



Energy Efficient Ethernet

How Low Can the Target Be?

No technical problem

1: Need sufficient time

2: Need dedication from all

How Low Can the Target Be?

No technical problem

1: Need sufficient time

2: Need dedication from all

Yes, We Can