

O que é o IoT DACYS TP4

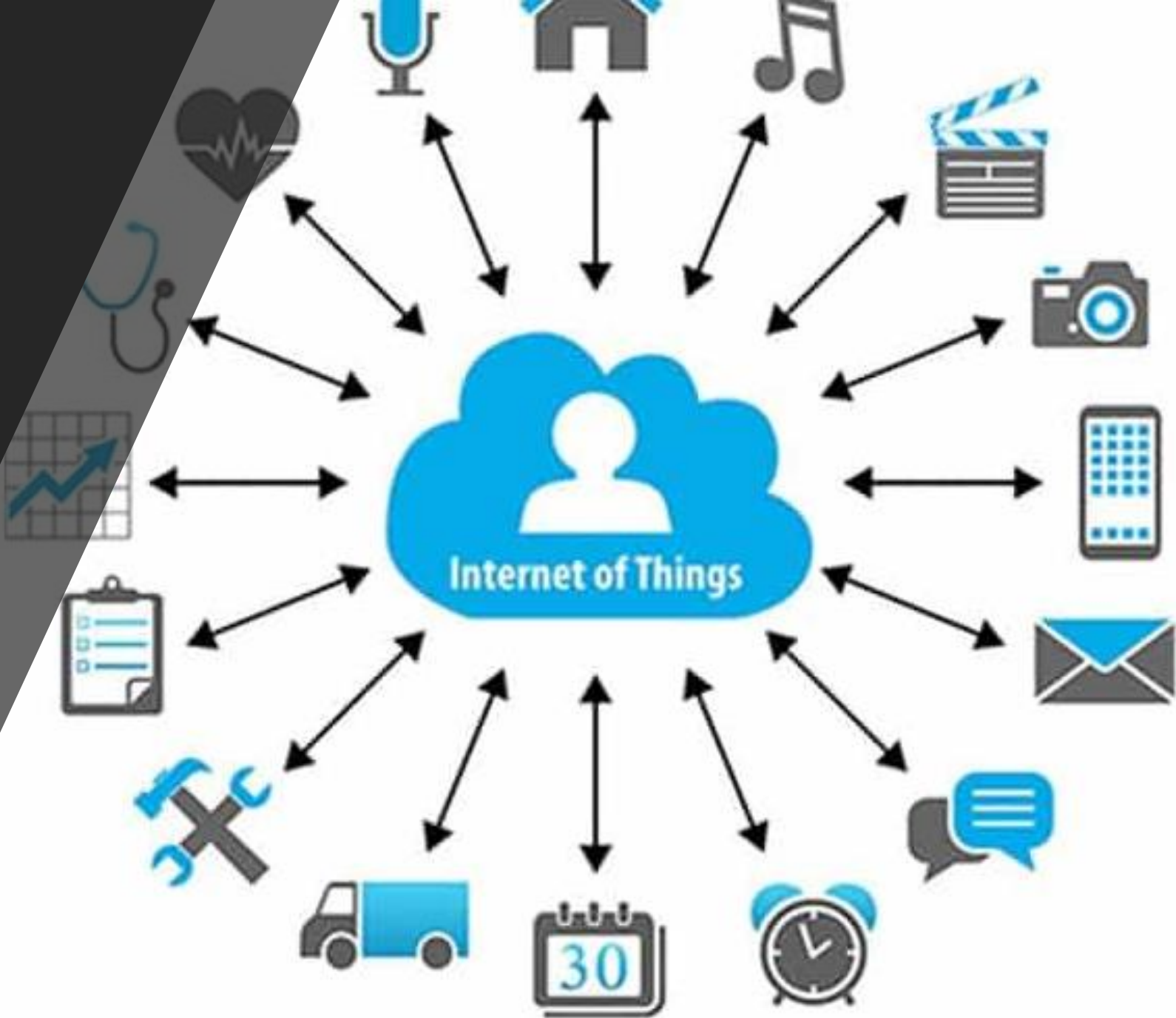
Nuno Peralta

Nsp@isep.ipp.pt

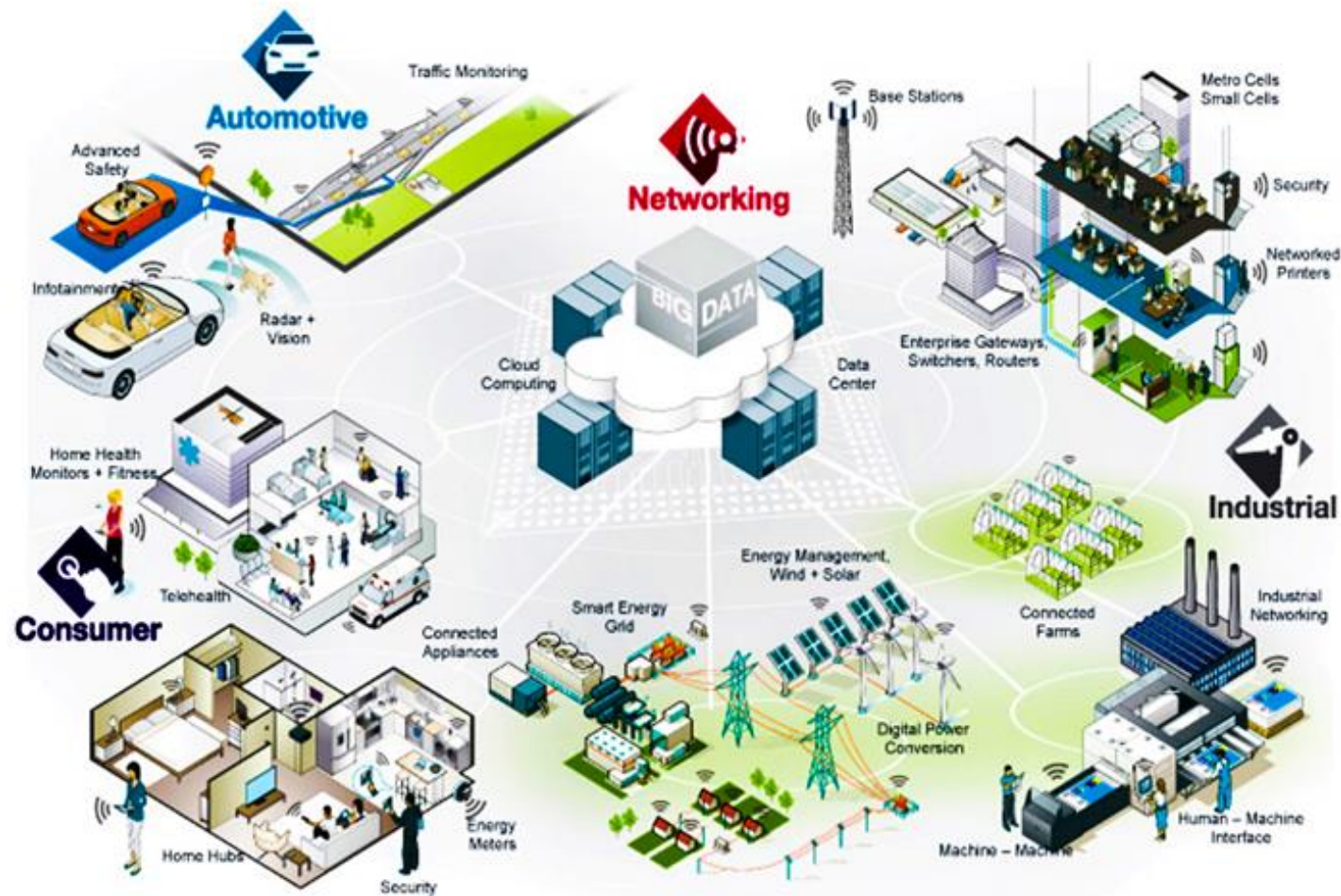
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O que é o IoT?

Internet of Things



Resumidamente...
tudo



Ataques comuns a IoT

- **Distributed denial of service (DDoS) (botnets)**
- **Firmware exploits**
- **Man-in-the-middle**
- **Data interception**
- **Physical attacks**
- **Brute force attacks**
- **Unauthorized access**
- **Ransomware**
- **Radio frequency jamming**

Alguns exemplos

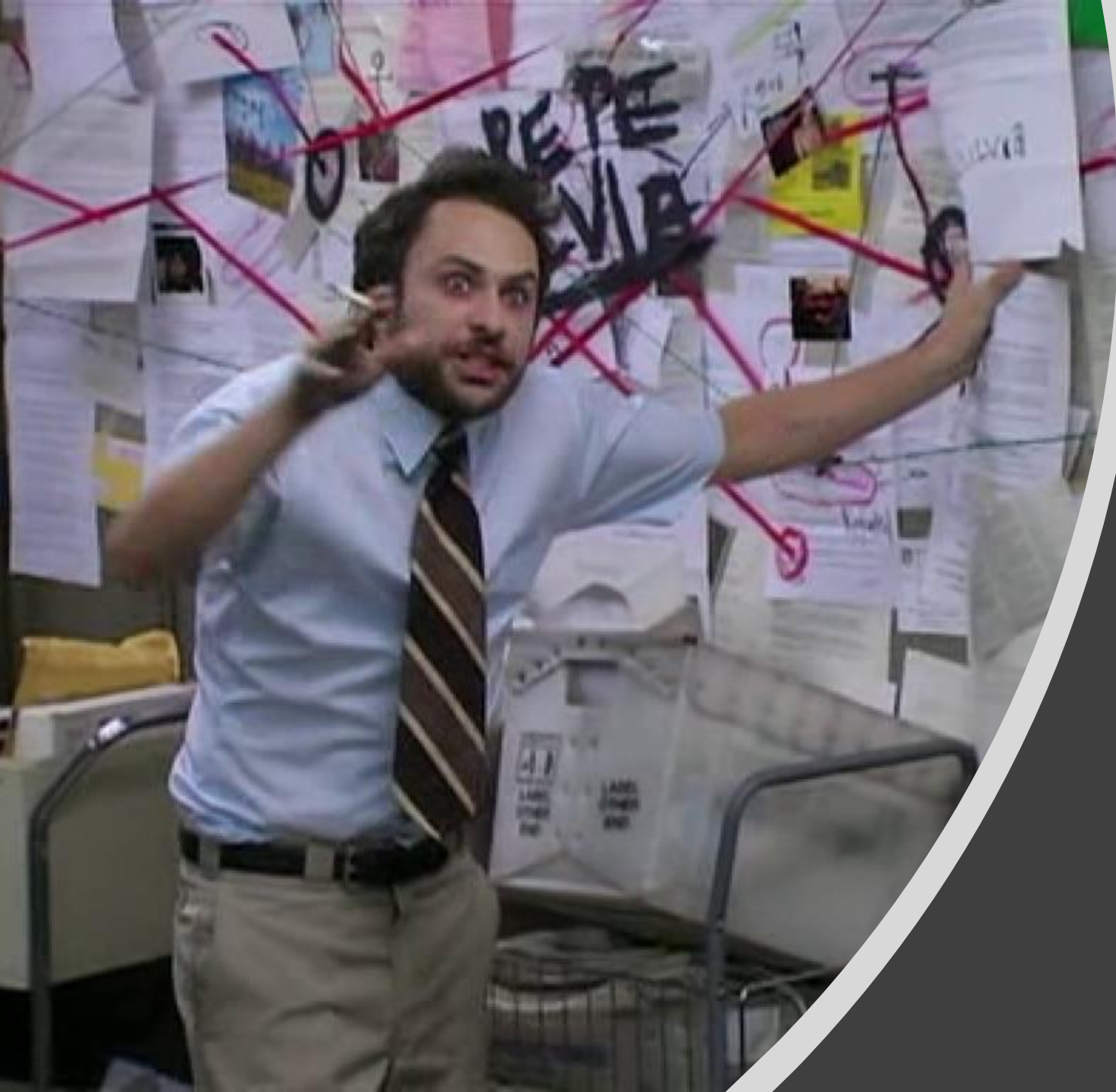
Mas antes, alguém
adivinha como se
ataca um casino?

A Casino Gets Hacked Through a Fish-Tank Thermometer

- "The attackers used that (a fish-tank thermometer) to get a foothold in the network," she recounted. "They then found the high-roller database and then pulled that back across the network, out the thermostat, and up to the cloud."

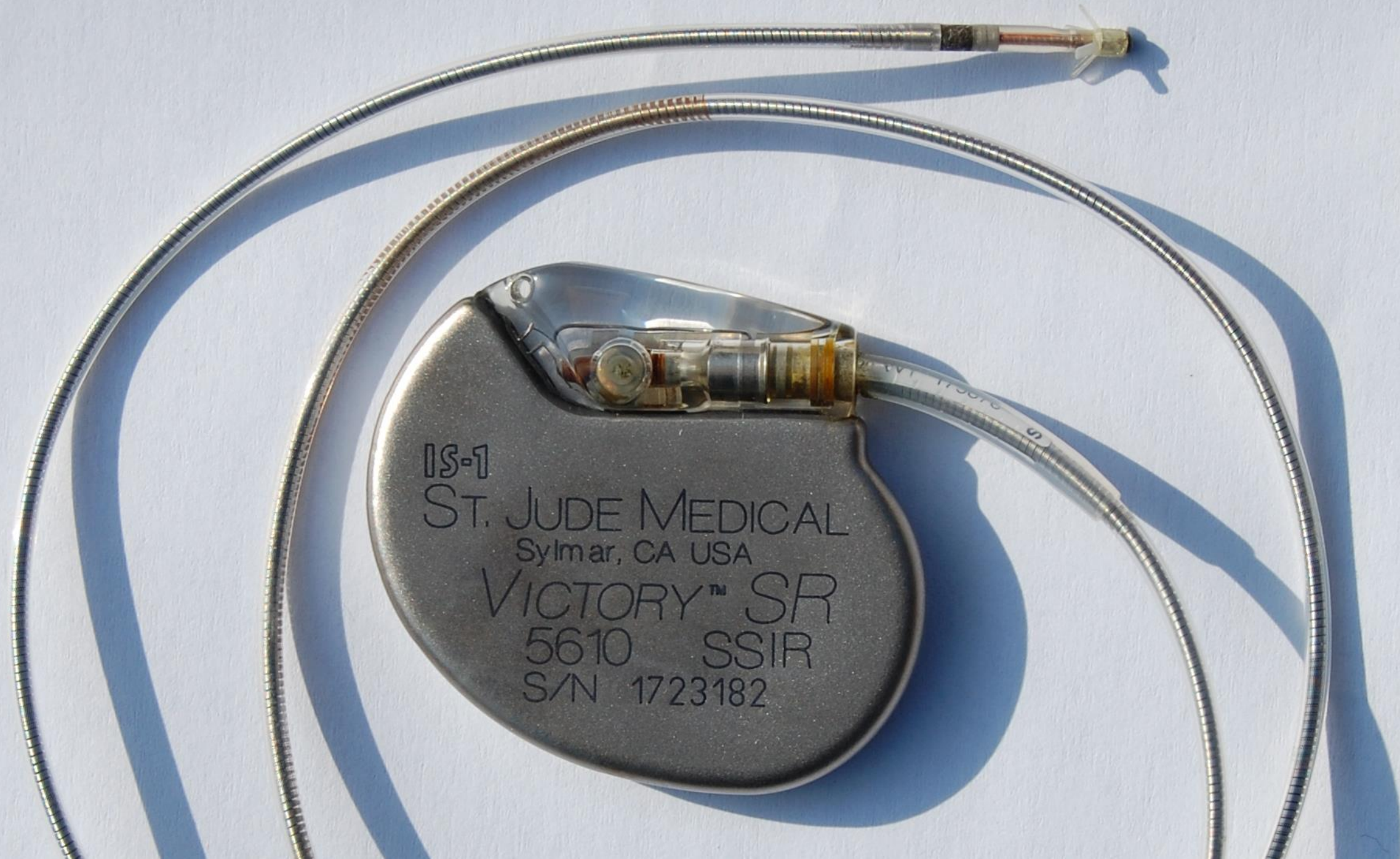


<https://www.entrepreneur.com/business-news/a-casino-gets-hacked-through-a-fish-tank-thermometer/368943>



O que estava a
acontecer com
os atacantes

Foi mau... mas de
certeza que não há nada
crítico que utilize IoT,
certo?

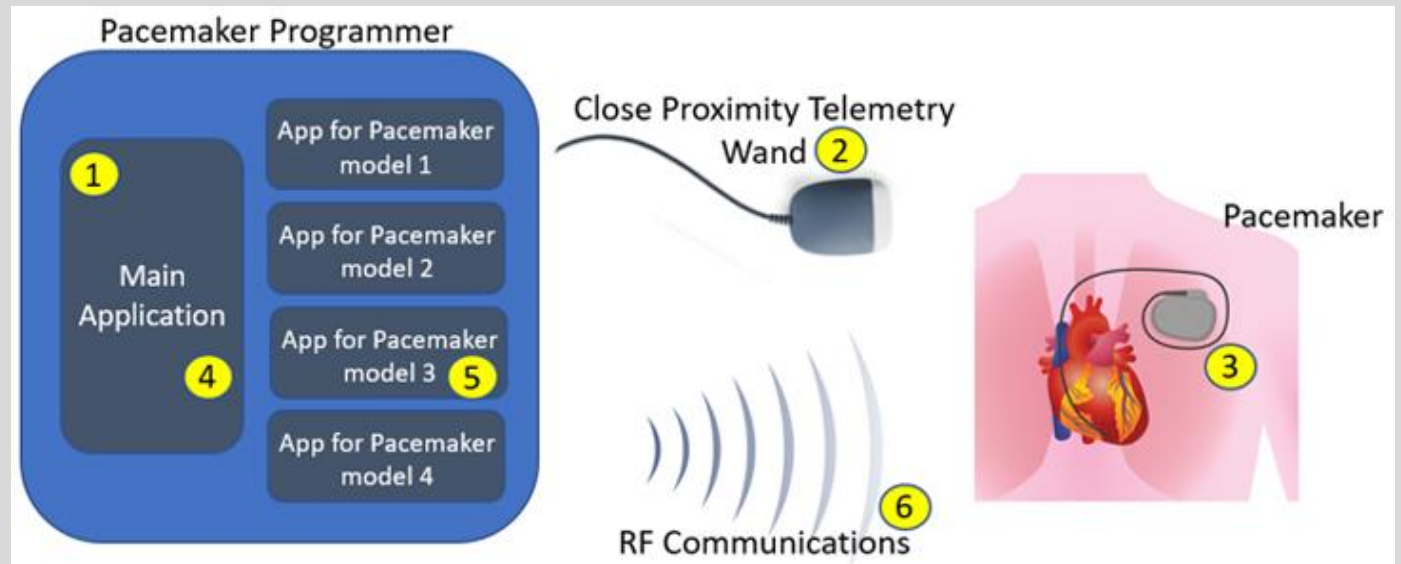


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Pacemakers ?!

"The first pacemaker hacks emerged about a decade ago. But the latest variation on the terrifying theme depends not on manipulating radio commands, as many previous attacks have, but on malware installed directly on an implanted pacemaker."

<https://www.wired.com/story/pacemaker-hack-malware-black-hat/>

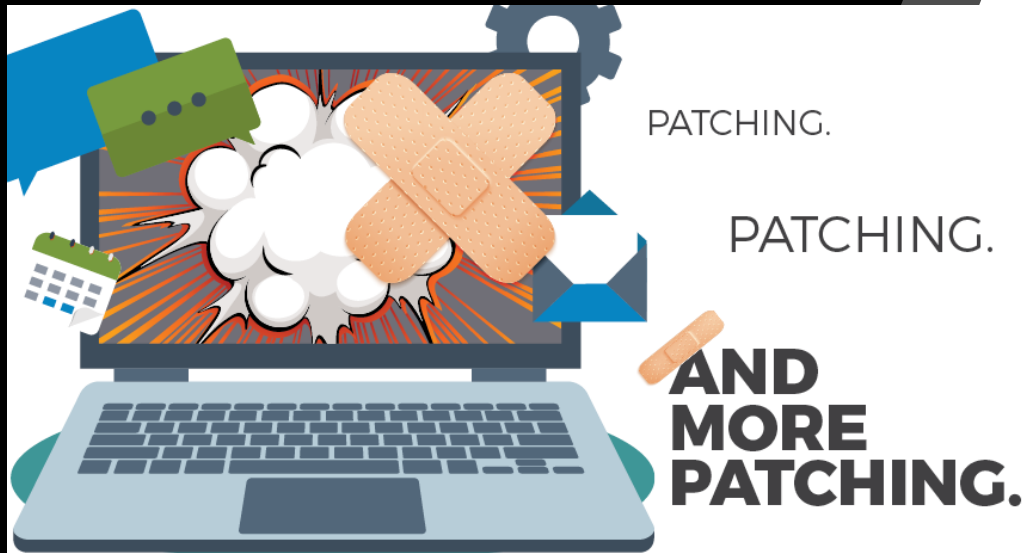


Algures na
Blackhat...

"We were talking about bringing a live pig because we have an app where you could kill it from your iPhone remotely."

Jonathan Butts, QED
Secure Solutions

A resistência a patching



"If you just code sign, all these issues go away, but for some reason they refuse to do that," Rios says. "We've proven that a competitor actually has these mitigations in place already. They make pacemakers as well, their programmer literally uses the same operating system [as Medtronic's], and they have implemented code signing. So that's what we recommend for Medtronic and we gave that data to the FDA." The programmers run the Windows XP operating system. (Yes, Windows XP.)

Como
resolver?!



A Solução

"Almost half a million pacemakers have been recalled by the US Food and Drug Administration (FDA) due to fears that their lax cybersecurity could be hacked to run the batteries down or even alter the patient's heartbeat.

The recall won't see the pacemakers removed, which would be an invasive and dangerous medical procedure for the 465,000 people who have them implanted: instead, the manufacturer has issued a firmware update which will be applied by medical staff to patch the security holes."

- <https://www.theguardian.com/technology/2017/aug/31/hacking-risk-recall-pacemakers-patient-death-fears-fda-firmware-update>



Dúvidas?