

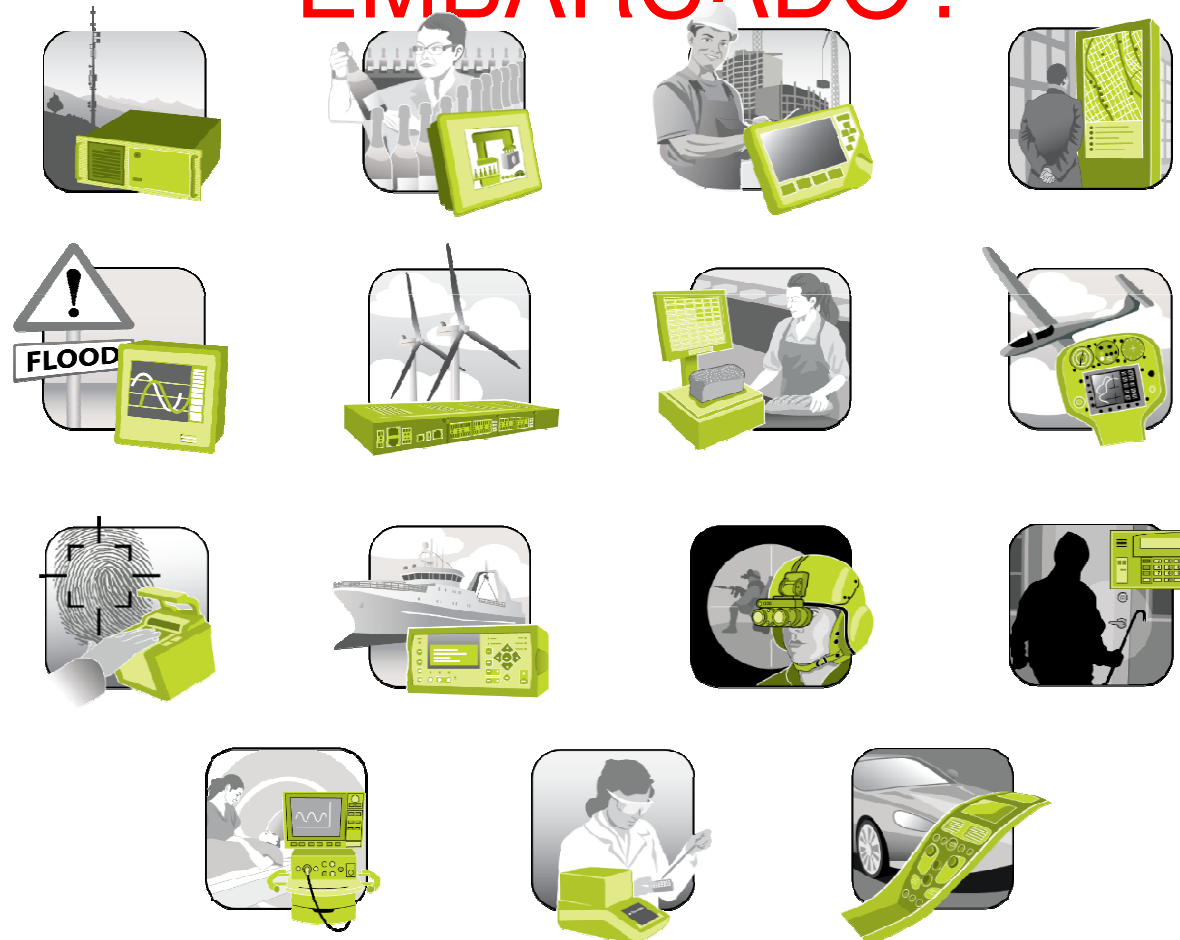


O mercado de desenvolvimento de sistemas embarcados no Brasil

Mcs. Guilherme Fernandes

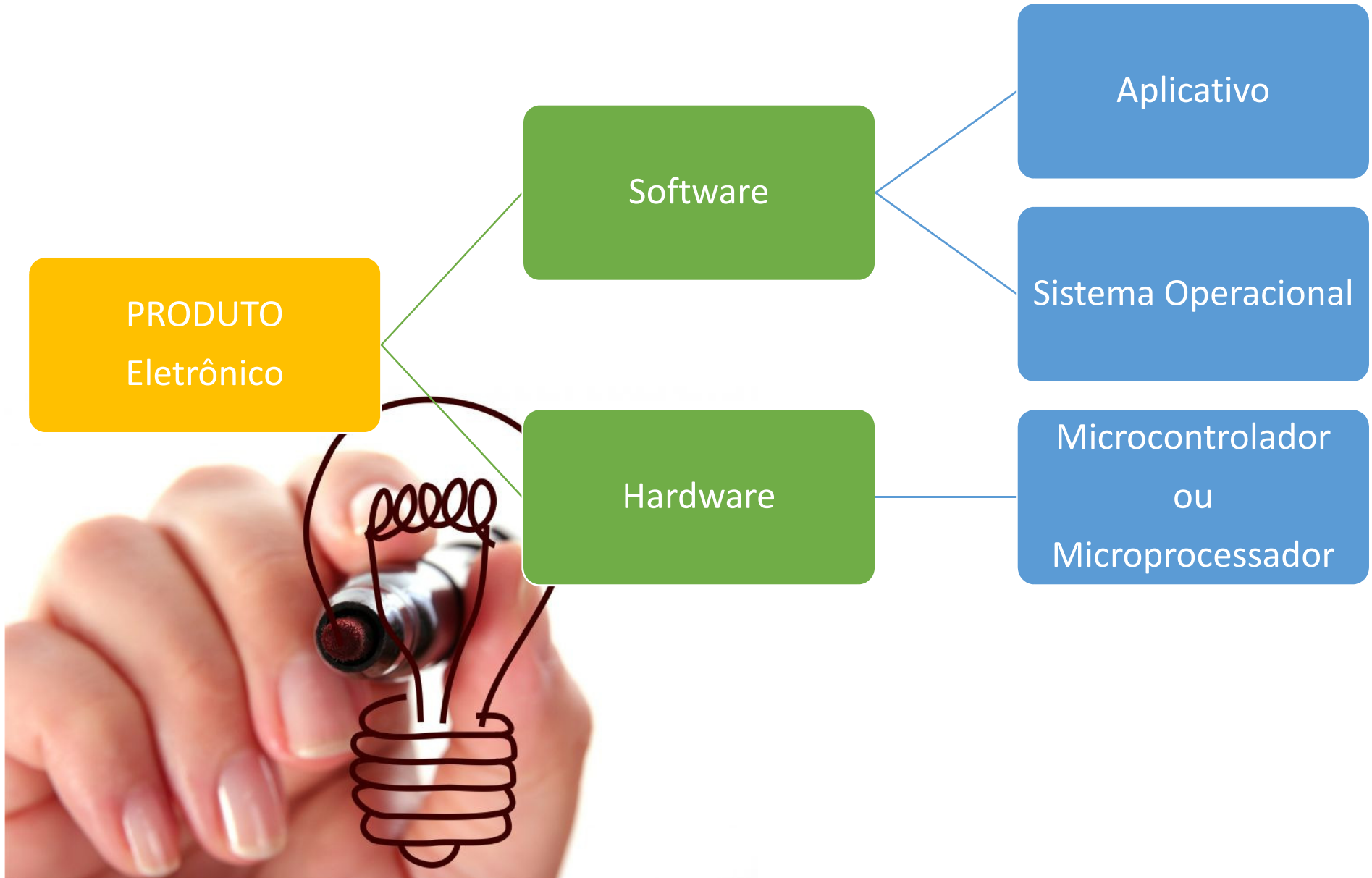


O que é um **SISTEMA EMBARCADO?**



Desenvolvimento de produtos







O primeiro computador do Guilherme:

Intel x86 → 486DX4 (100 Mhz)

Windows 95!!!



O celular que o Guilherme vai comprar:
(Assim que conseguir convencer a esposa)

64-bit 2.0 GHz quad-core ARM® Cortex™
A57 and quad-core A53





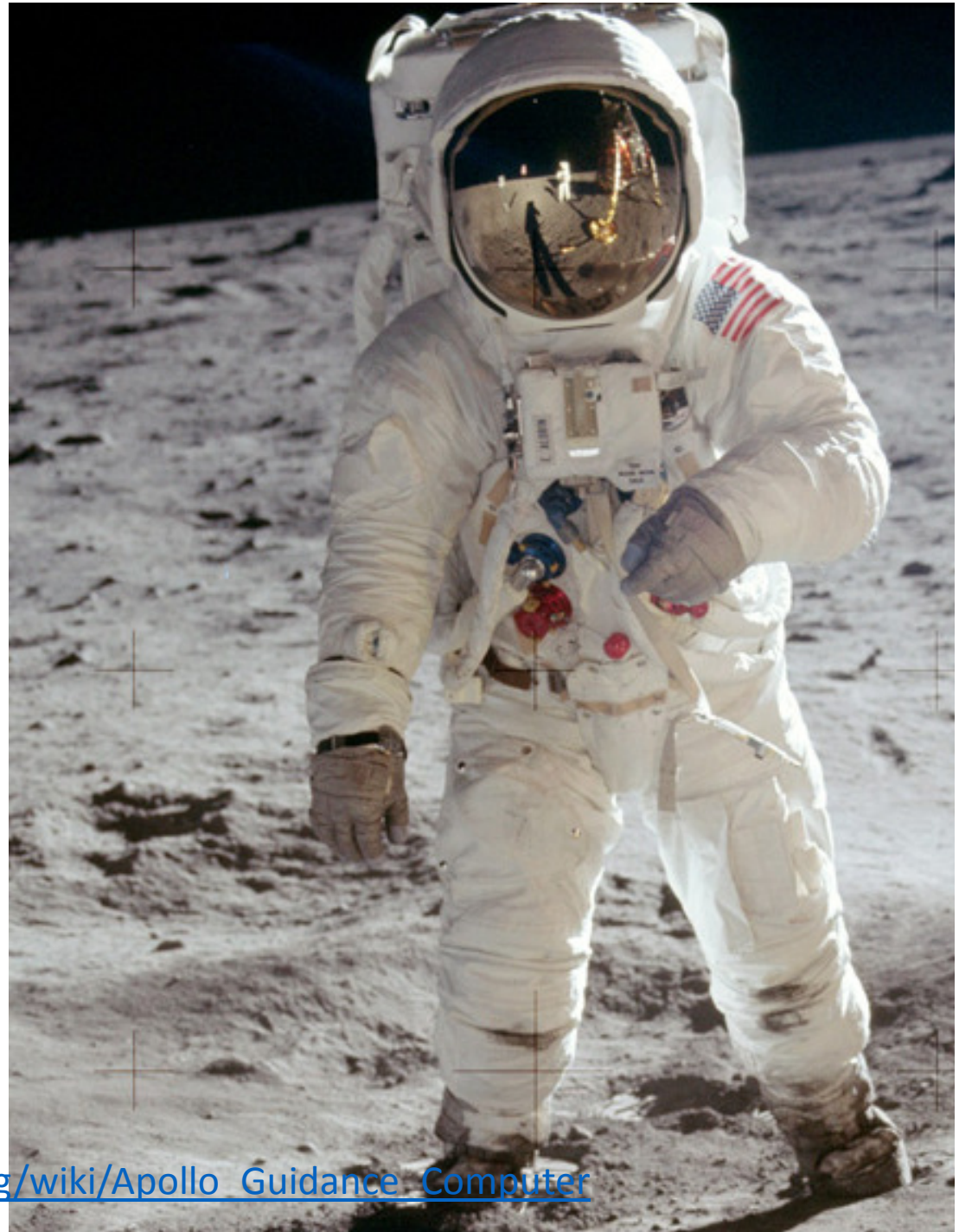
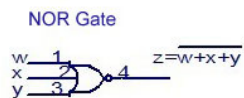
| | |
|-----------|---------------------------------------|
| Processor | Discrete IC RTL based |
| Frequency | 2,048 MHz |

4,100 ICs, each containing a single three-input [NOR gate](#)

3 Input NOR Gate

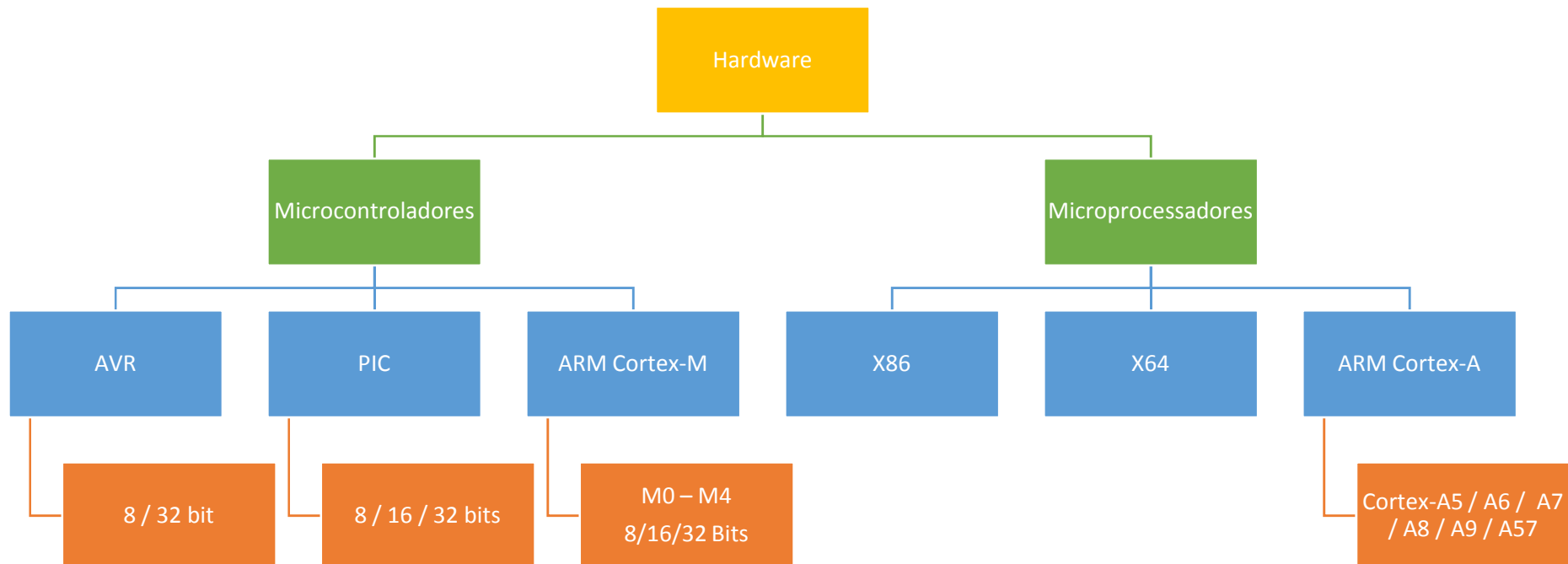
TRUTH TABLE

| INPUTS | | | OUTPUT |
|--------|---|---|--------|
| W | X | Y | Z |
| 0 | 0 | 0 | 1 |
| 0 | 0 | 1 | 0 |
| 0 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 |
| 1 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 0 |
| 1 | 1 | 1 | 0 |



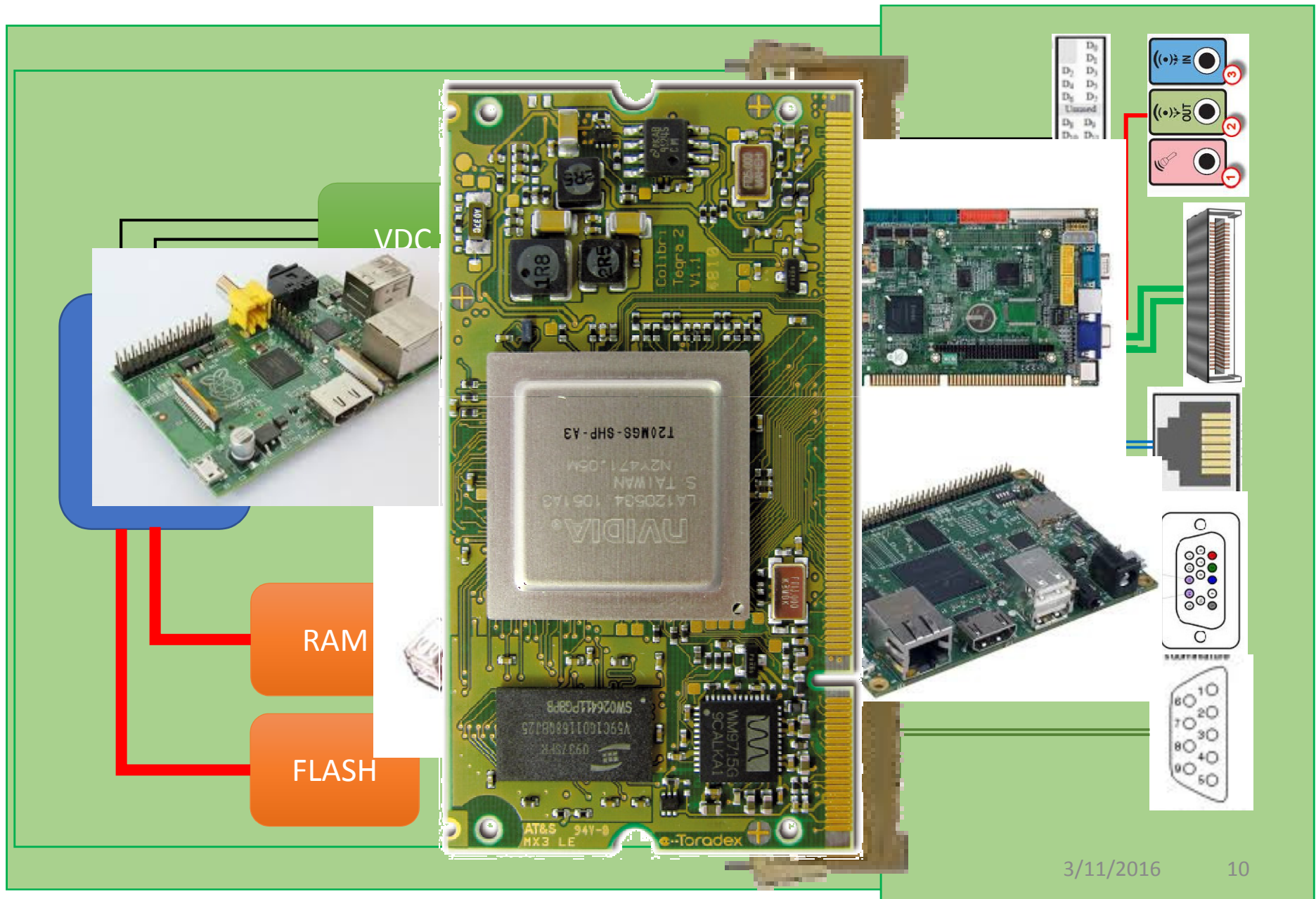
https://en.wikipedia.org/wiki/Apollo_Guidance_Computer





Todo microcontrolador/microprocessador tem um propósito!
Nem todos são para o mercado de embarcados!

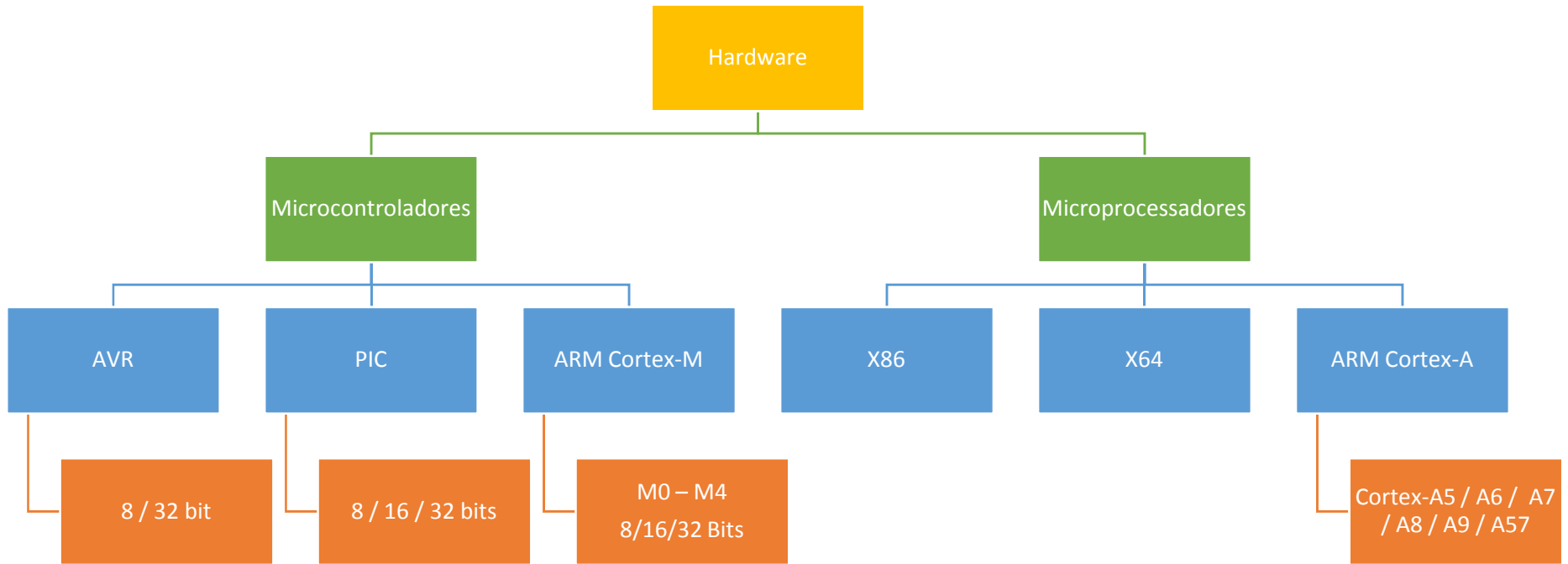
Como desenvolver meu produto embarcado?



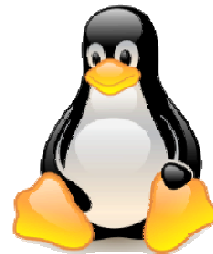


A real-time system is a system that must satisfy explicit (bounded) response-time constraints or risk severe consequences, including failure.

Real-Time System Design and Analysis, Phillip A. Laplante



Freescale MQX



Linux



Windows Embedded 8

Application Development

```
//  
// Dear maintainer:  
//  
// When I wrote this code, only I and God  
// knew what it was.  
// Now, only God knows!  
//  
// So if you are done trying to 'optimize'  
// this routine (and failed),  
// please increment the following counter  
// as a warning  
// to the next guy:  
//  
// total_hours_wasted_here = 67  
//
```









