Device and System Design University of Cadence

Development and research of IP-blocks verification method by Perl language

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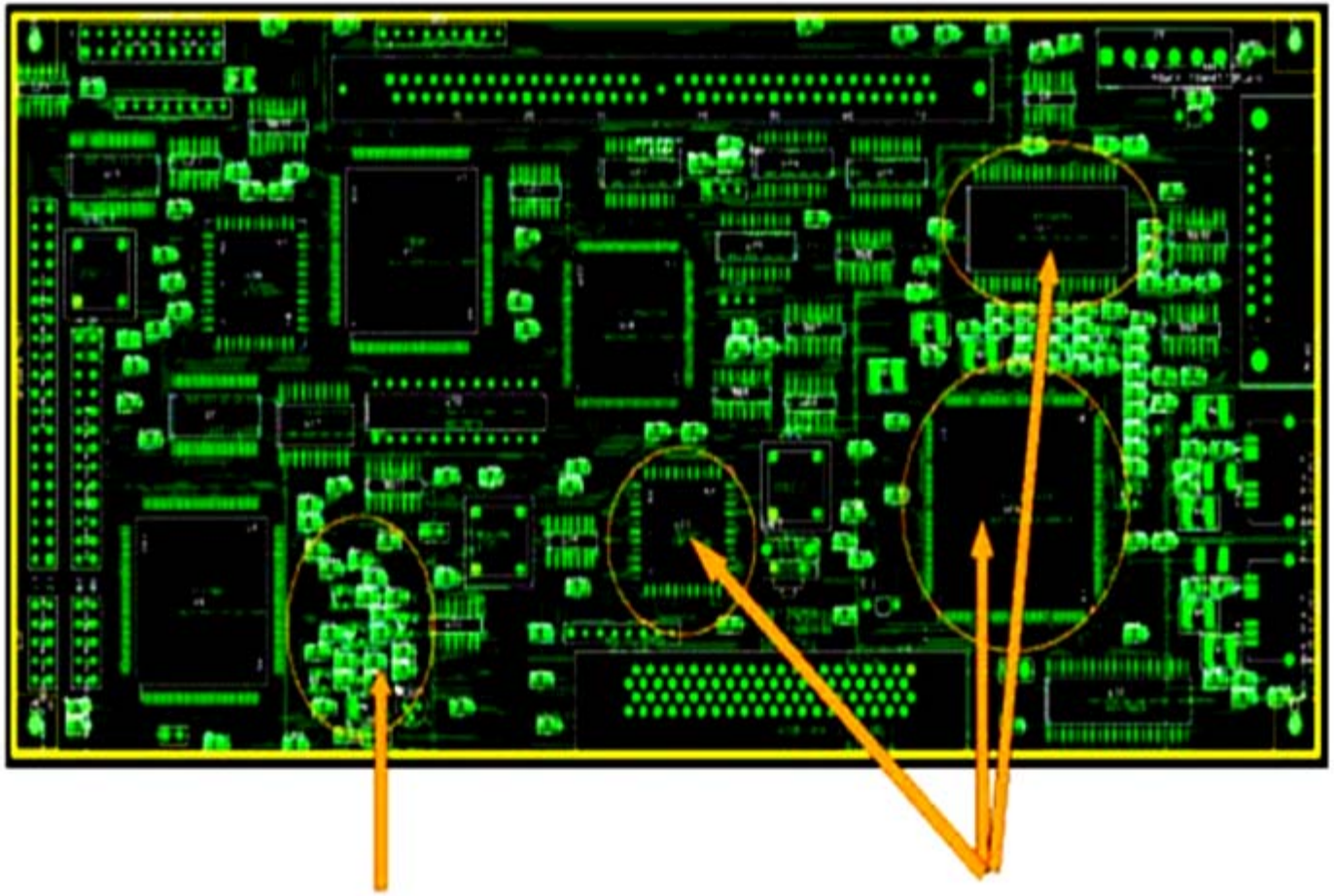
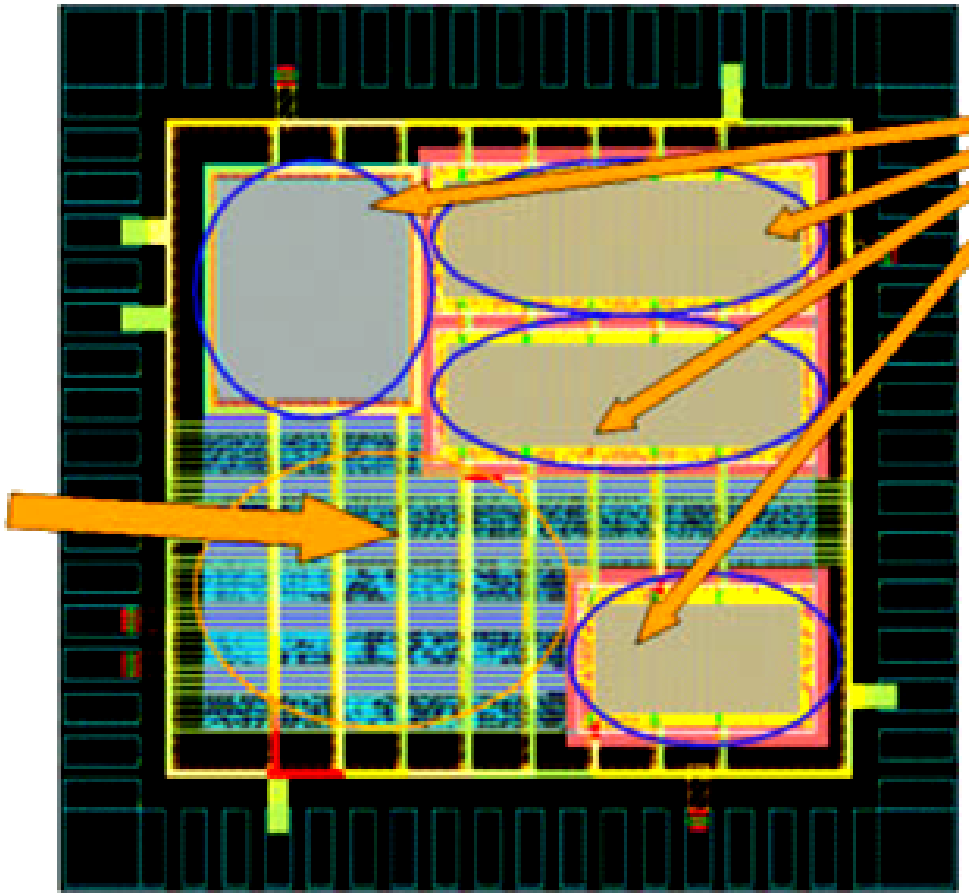
System on a printed circuit board



Discrete elements

Electronic components

System on a chip (SoC)



IP-blocks

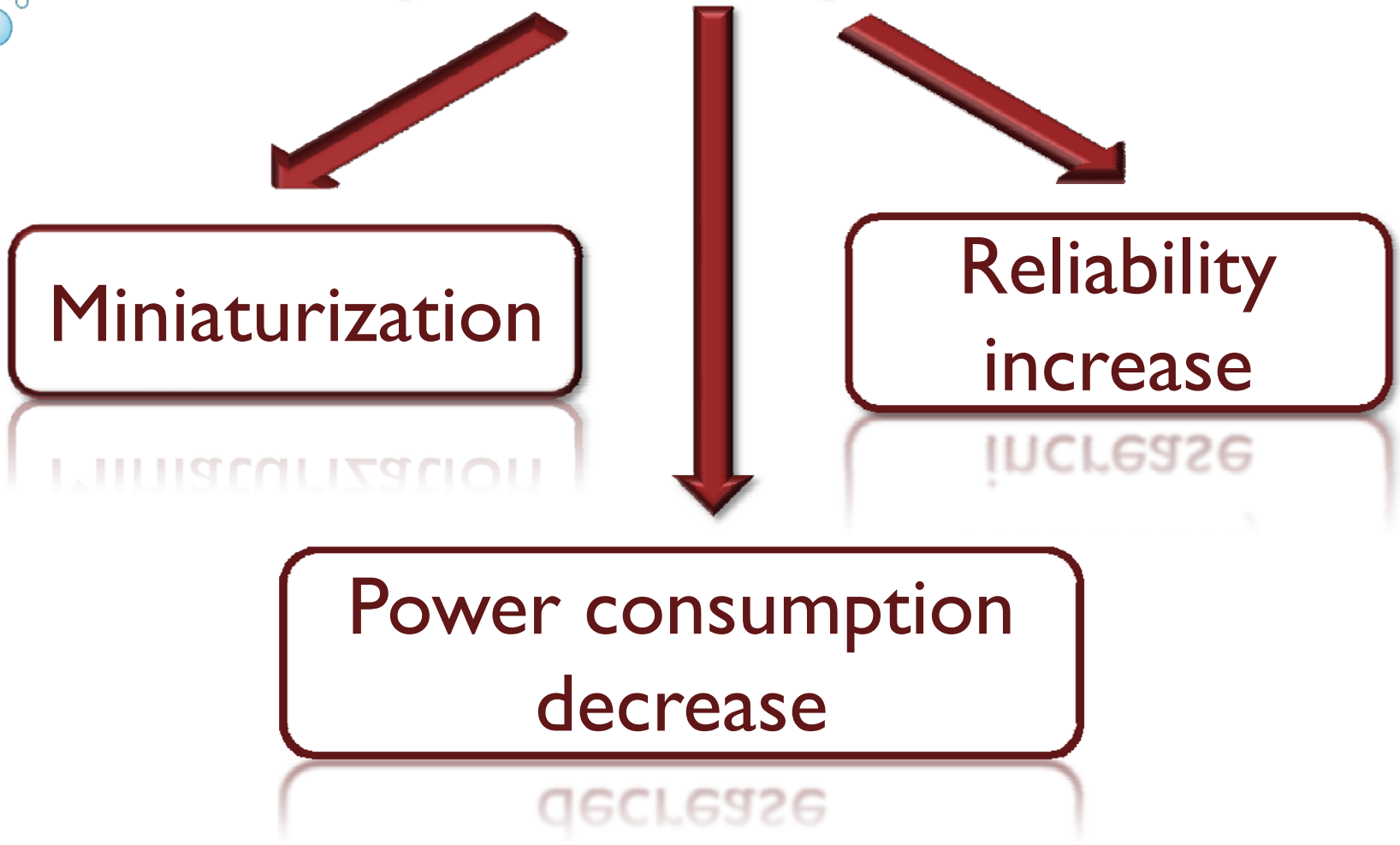
Intellectual Property

Logic

Creation process "system on a chip" means the decision of following tasks:

1) Working out of IP-blocks;
2) IP-blocks verification;
3) Designing SoC at systemic-functional level from Virtual Component;
4) Integration of all blocks on a chip.

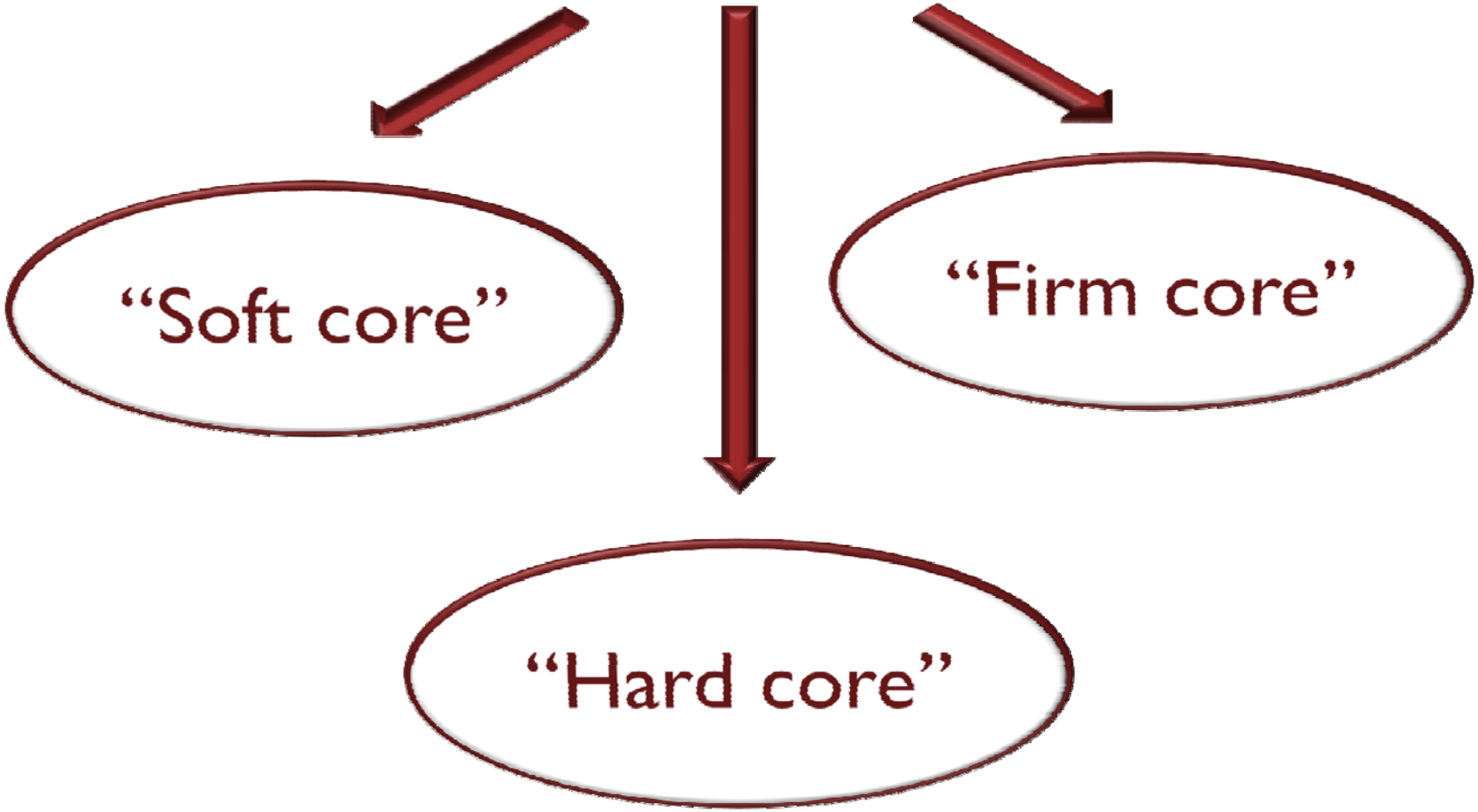
Advantages "system on a chip" before classical "system on a printed board":



Examples of IP-blocks which are most often used in projects SoC:

- Programmed devices: RISC, DSP;
- Memory: RAM, DRAM, Flash;
- Standard interfaces: PCI, USB;
- Video and audio decoders: MPEG2;
- Digital-to-analogue blocks: ЦАП, АЦП;
- Analog and high-frequency components: PLL (Phase-Locked Loop).

Classification IP-blocks by a method of licensing:



Thank you for your attention!