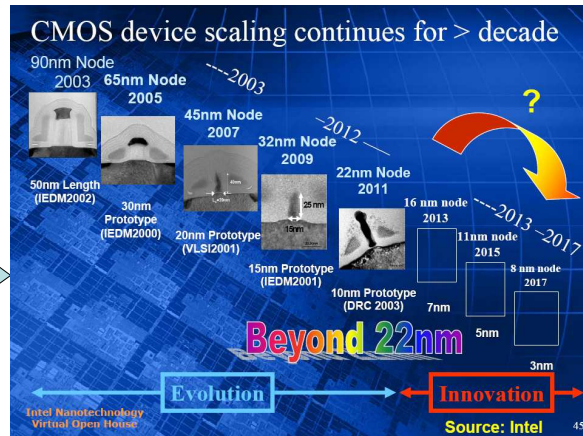
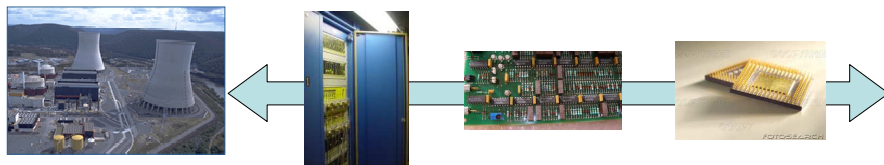
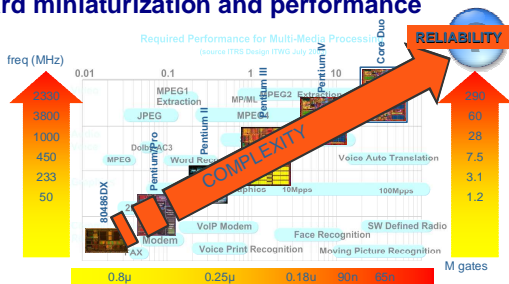


How could utilities/end-users fit adapt their needs with the technology trends of electronic semiconductors ?



The electronic trends toward miniaturization and performance



Increased needs for computing power have been solved by increasing chip complexity:

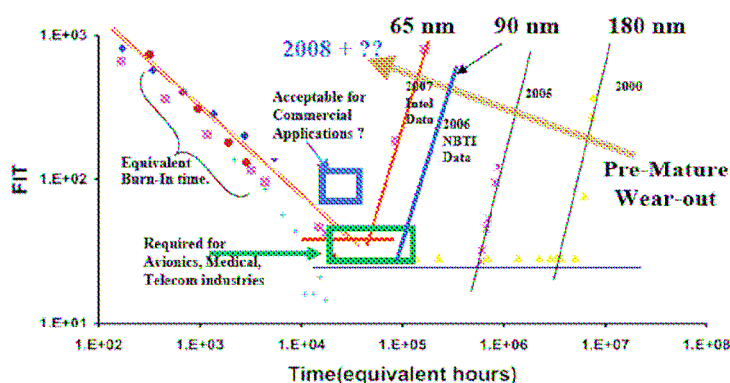
- More integrated technology
- Higher clock frequency

Consequences are more complex architectures, higher thermal dissipation. The scale changes towards the nano induce new hard and soft failures, more sensitive to the environment

Next challenge will be **RELIABILITY**

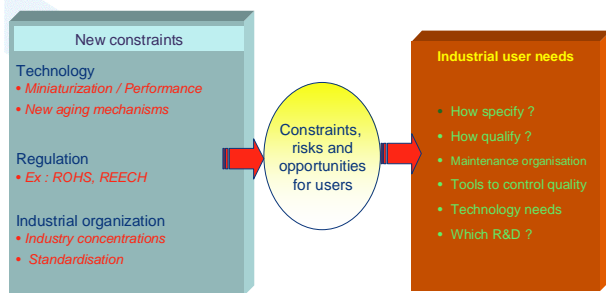


Some papers show that we soon may face a challenge on reliability



This issue is not only a nuclear I&C owners concern : all the industry is concerned.

Specific industrial users efforts to follow the electronic trends



The industrial needs and stakes in electronics

For Industry

Pervasiveness and key-roles of electronics
The use of new technologies is strategic

Expected lifetimes of the systems:

- Energy: Nuclear Power Plant = 60 years
- Aeronautics: A380 = 30 years
- Space: 20 years
- Automotive: 10 to 20 years.
- Mobile phone: 2 to 5 years

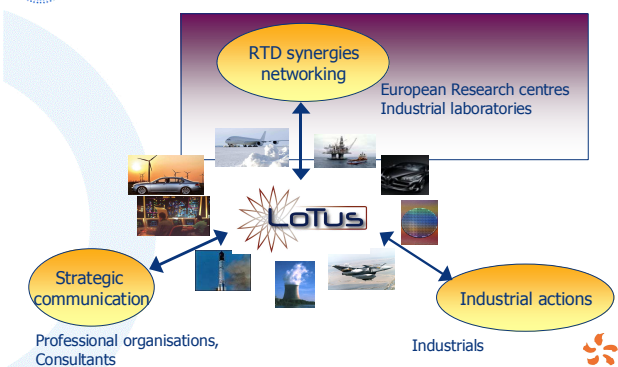
For Europe

Europe = Worldwide leader in professional electronic equipments market

28% of the world production More than 120 BE/year.



Structured networks at a European level



LOTUS is currently an informal network that gathers various European industrials (automotive, space, industry, aeronautics, defense ...). It should identify and support the needed R&D efforts in order to manage and anticipate the Long-Term reliability of professional electronics. It should also enhance a European state-of-the-art about Long-Term management with the most recent commercially-available electronics.

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