

Secure Ambient Intelligence Landscape *Needs*

Dependable Information Infrastructures

Jean-Claude Laprie

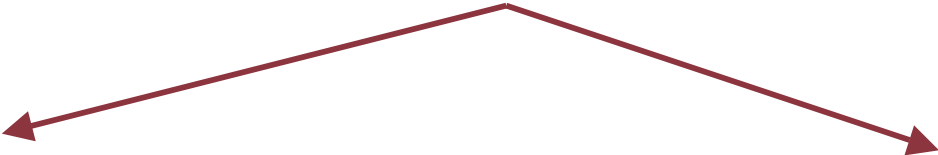


Secure AmI landscape *needs*

dependable information infrastructures

- Forecasted functionalities of the AmI make vulnerabilities (even more) threatening
- Need for basic technological research that addresses challenges such as
 - Boundless openness
 - Seamless evolutivity
 - Dynamic mobility

from a dependability viewpoint, wrt mainly design and interaction faults, both accidental and malicious



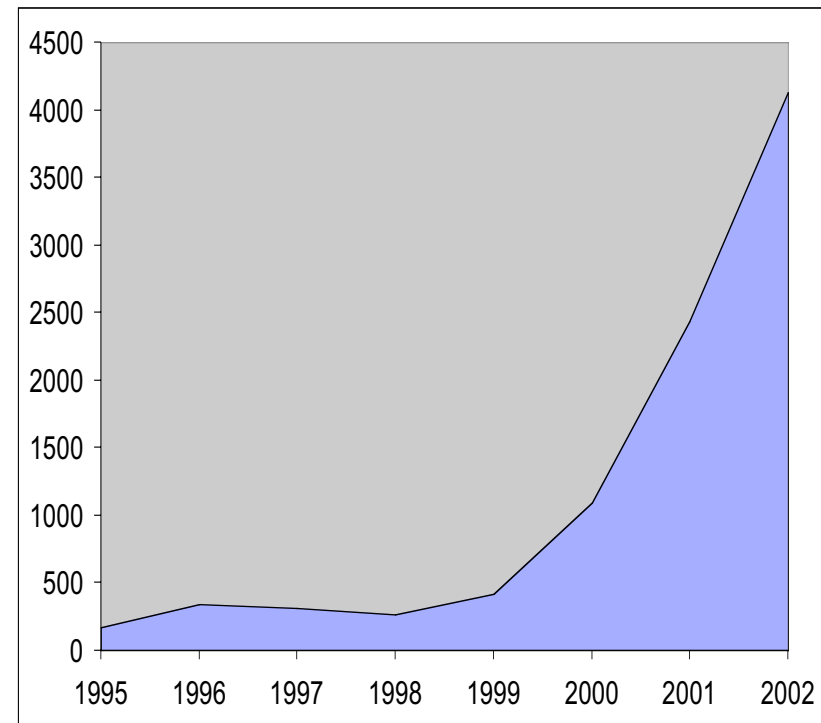
Exemplifying possibilities via
short to medium term
demonstrations and
experimentations

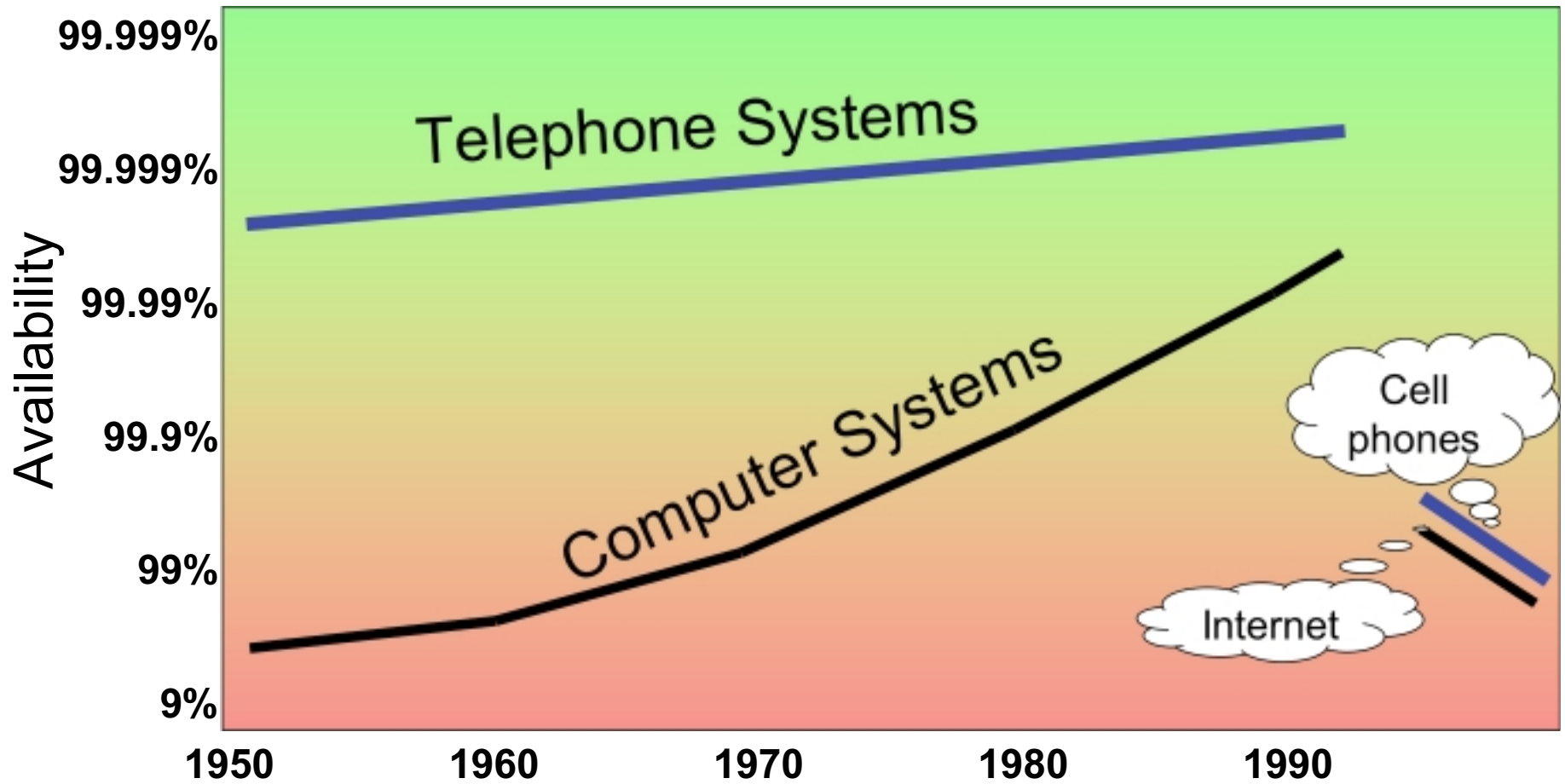
Excellence upholding
and long-term
solutions

Forecasted (predicted) functionalities of the Ambient Intelligence landscape make vulnerabilities (even more) threatening

- High cost of system failures
~ 60 B€/yr in EU or USA
- High cost of preventing system failures: maintenance
[Space shuttle software: 100 M\$/yr]
- High cost of development process failures
~ 80B€/yr in EU or USA
[out of 8830 US software projects:
 - 16% successful
 - 53% challenged
 - 31% cancelled]

Vulnerabilities





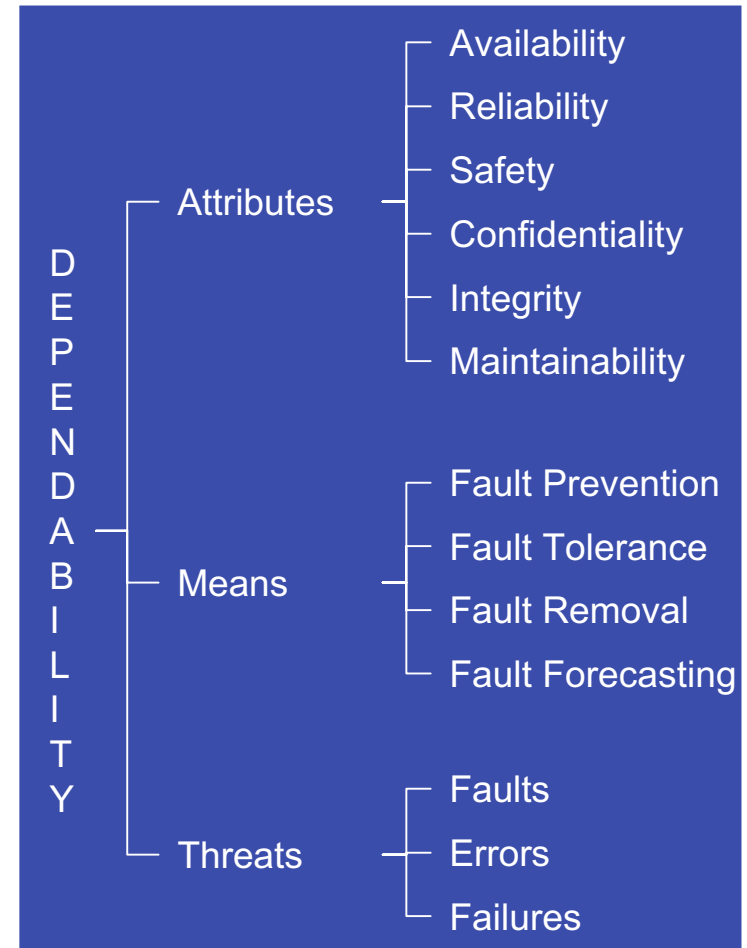
From J. Gray, Dependability in the Internet era

- Complexity
- Economic pressure

Need for basic technological research that addresses challenges such as:

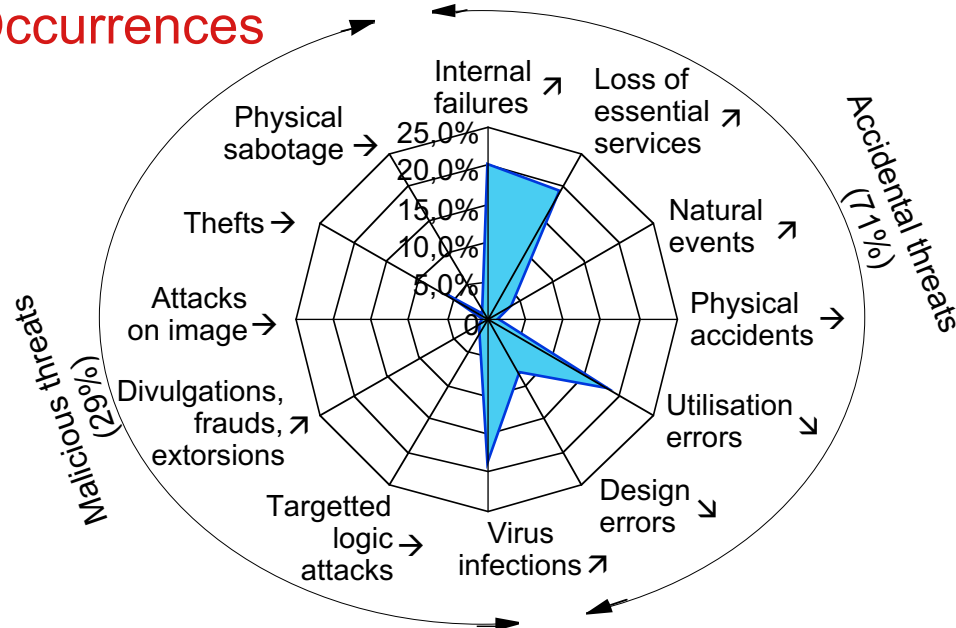
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- Seamless evolutivity,
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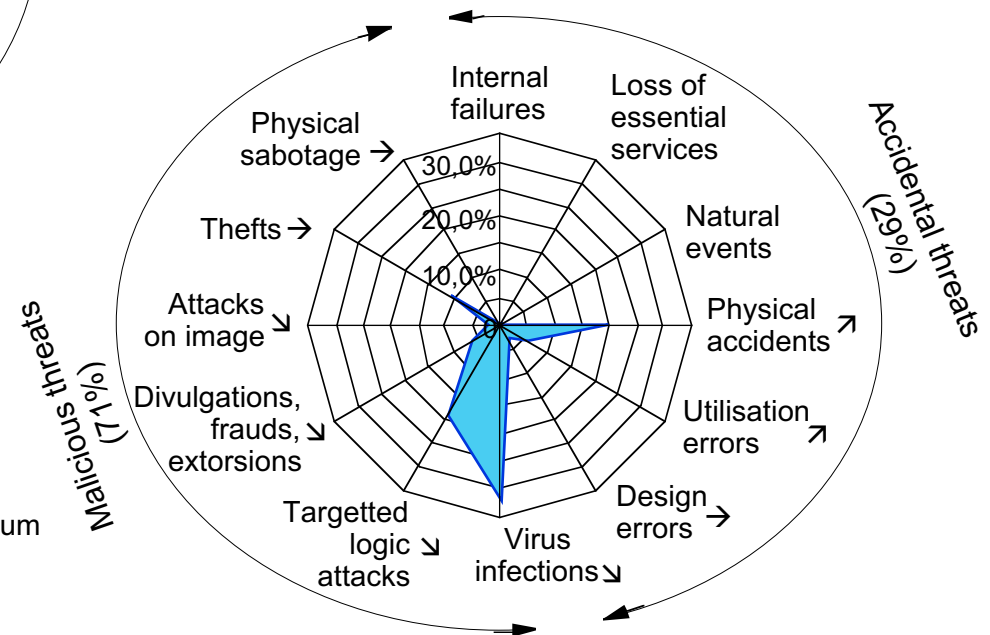
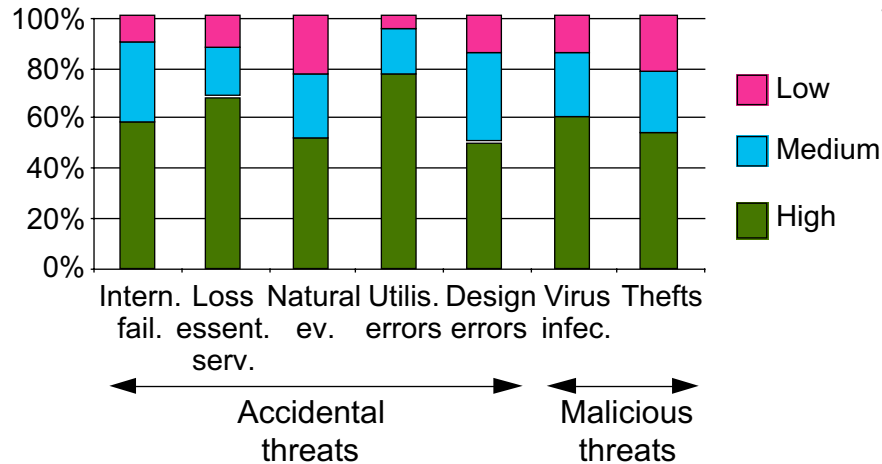
Annual survey on computer damages in France (Years 2000, 2001, 2002)

Occurrences



3 year trend
 → stable
 ↗ increase
 ↘ decrease

Occurrence impact



Perceived risks

Secure AmI landscape
needs

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