

AccessionIndex: TCD-SCSS-X.20121208.009

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Accession By: Dr.Brian Coghlan

Object name: History of the early ideas of computers

Vintage: 2012

Synopsis: The evolution of early conventional and unconventional computer architectures.

Description:

The evolution of computing is strewn with the contest of new ideas that have potential until rigorously tested in realistic environments. Sometimes competitive commercial pressures strangle their promise. Often they fail to be tractable with the technology of the time. In time the unsuccessful candidates come to be viewed as unconventional, and generic histories of computing then often neglect these unsuccessful ideas, sadly forgetting that some might be of value reincarnated or adapted when tractable with newer technology.

This document is an aggregation of two lectures on the history of computing within a first year undergraduate course on digital logic, plus a final year undergraduate module on unconventional computing, both from a computer architecture and hardware perspective, and both given by Dr.Brian Coghlan.

It begins with the endless fight against tractability: its prehistory up to 1939, its seminal developments from 1940 to 1951, its expansion phase in the 1950s and early 1960s, its prehistory of solid-state computing up to 1971, and its subsequent evolution (one might say explosion) exploiting solid-state electronics, all alongside the evolving but endless fight against errors. This item is as yet a draft.

The homepage for this catalog is at: <https://www.scss.tcd.ie/SCSSTreasuresCatalog/>
Click 'Accession Index' (1st column listed) for related folder, or 'About' for further guidance. Some of the items below may be more properly part of other categories of this catalog, but are listed here for convenience.

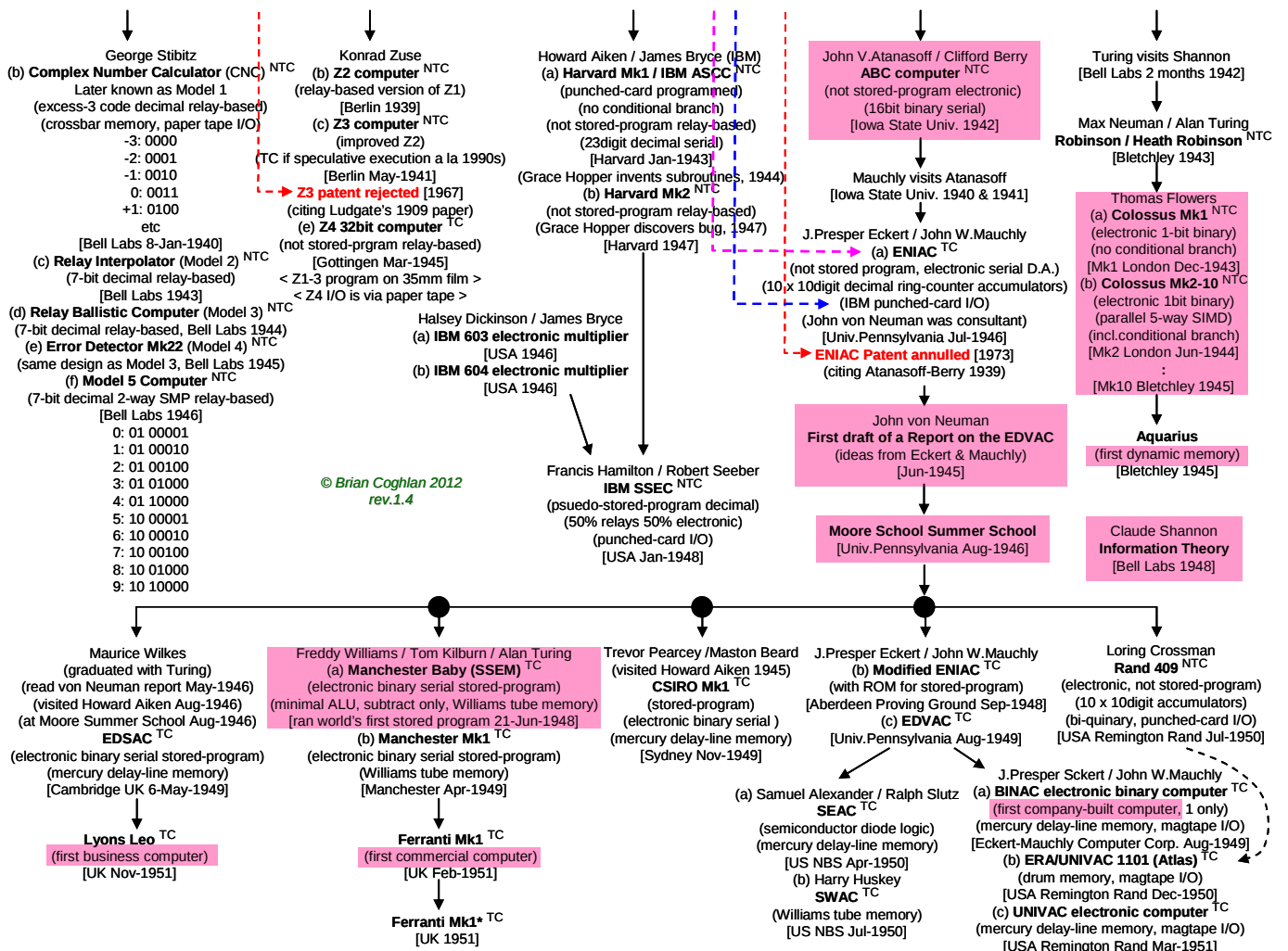
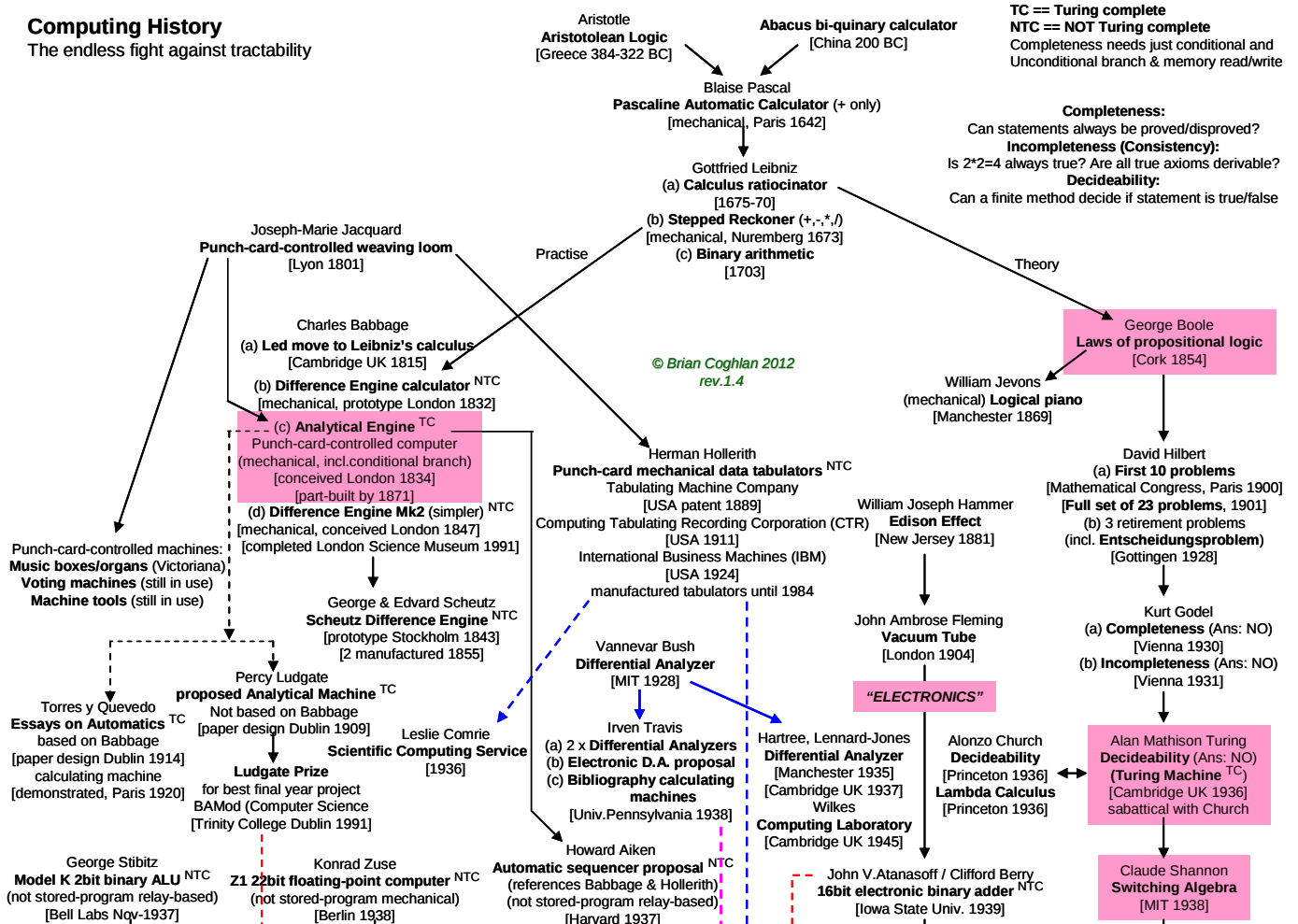
Accession Index	Object with Identification
TCD-SCSS-X.20121208.009	History of the early ideas of computers. The evolution of early conventional and unconventional computer architectures. 2012.

References:

1. Wikipedia, *Computer architecture*, see:
https://en.wikipedia.org/wiki/Computer_architecture
Last browsed to on 16-Nov-2024.
2. Wikipedia, *History of computing hardware*, see:
https://en.wikipedia.org/wiki/History_of_computing_hardware
Last browsed to on 16-Nov-2024.

Computing History

The endless fight against tractability



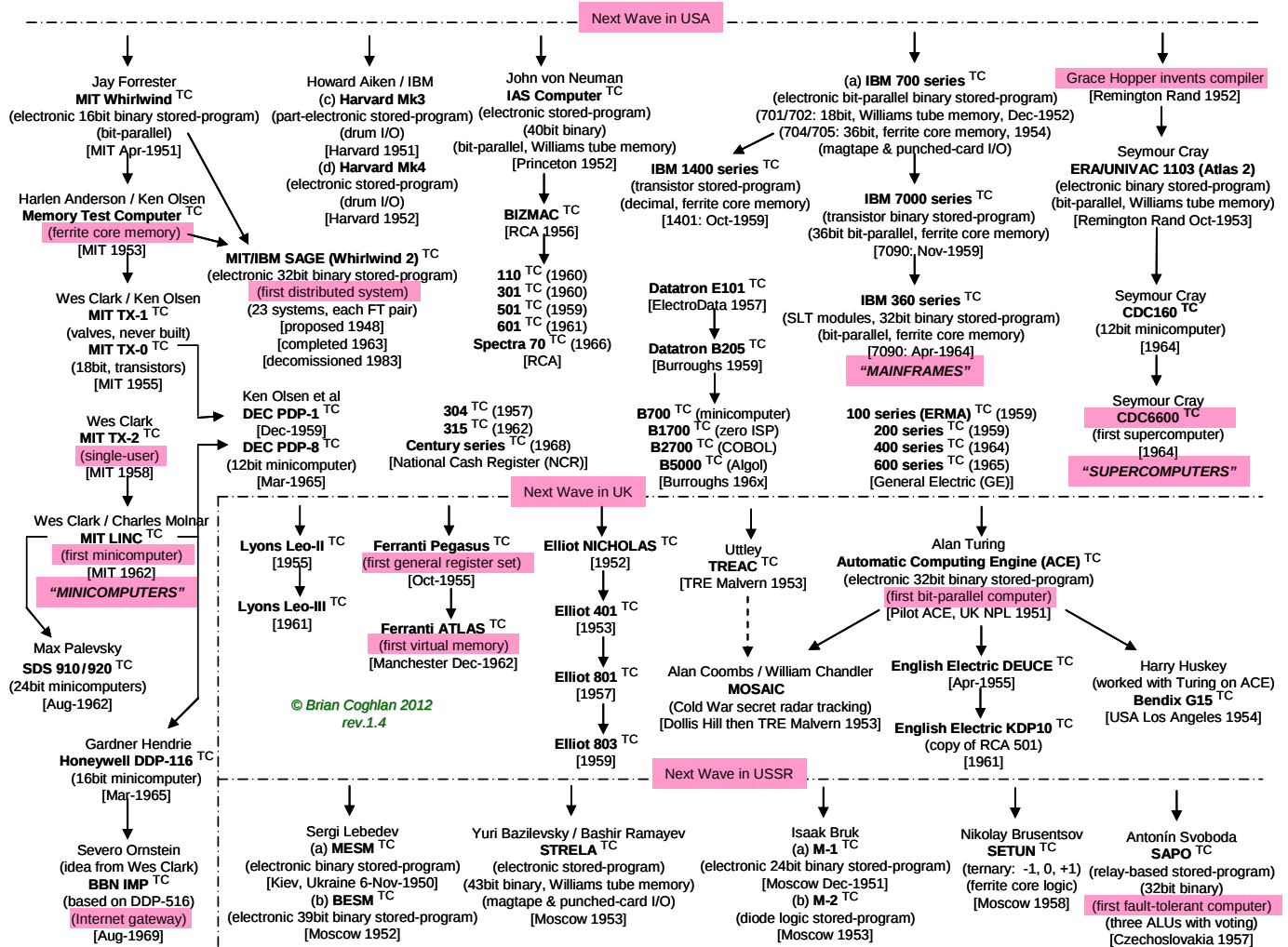


Figure 3: Computing History: The endless fight against tractability, its expansion phase in the 1950s and early 1960s.

Solid-State Computing History

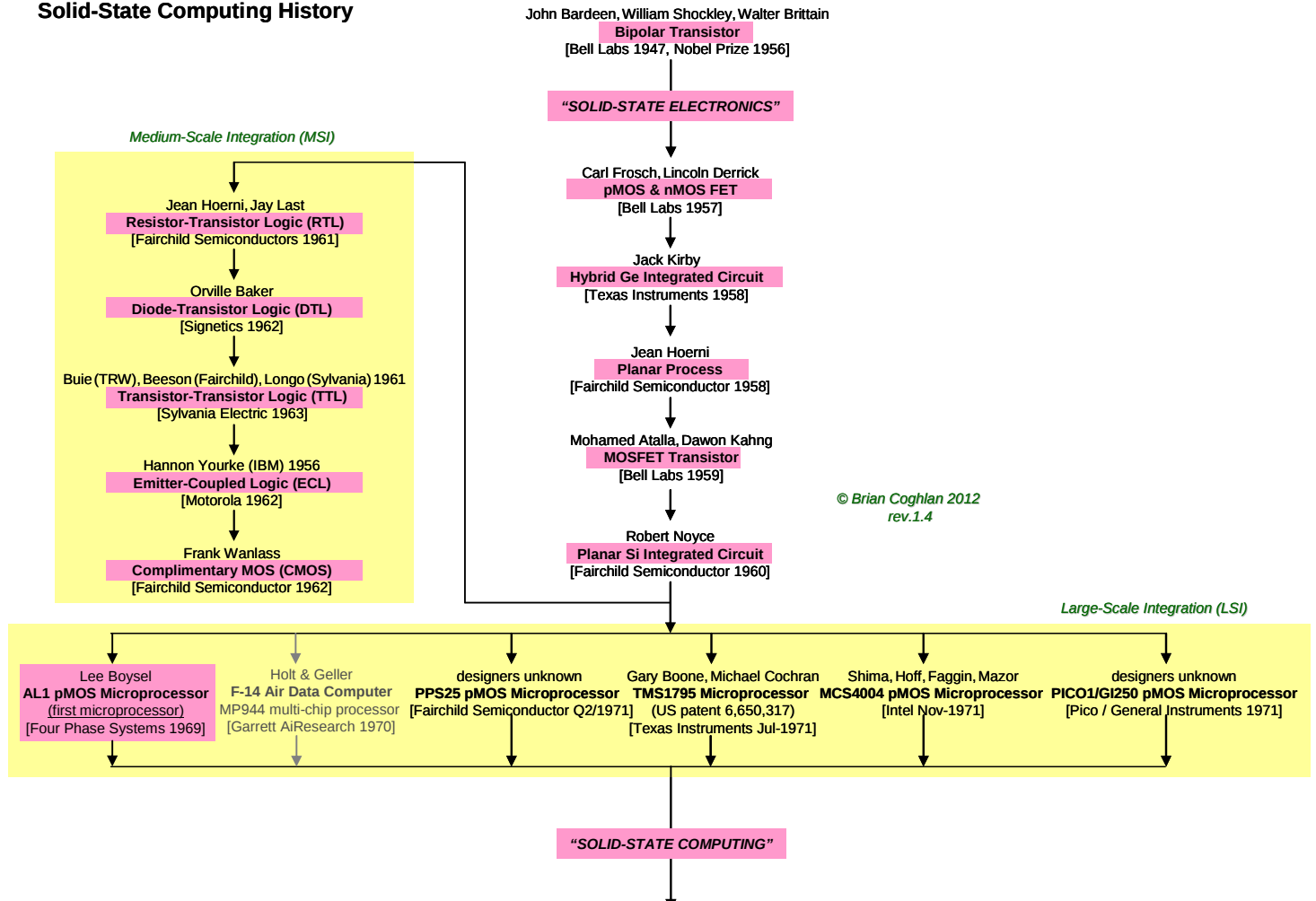


Figure 4: Computing History: The endless fight against tractability, its prehistory of solid-state computing up to 1971.

Subsequent Computing History

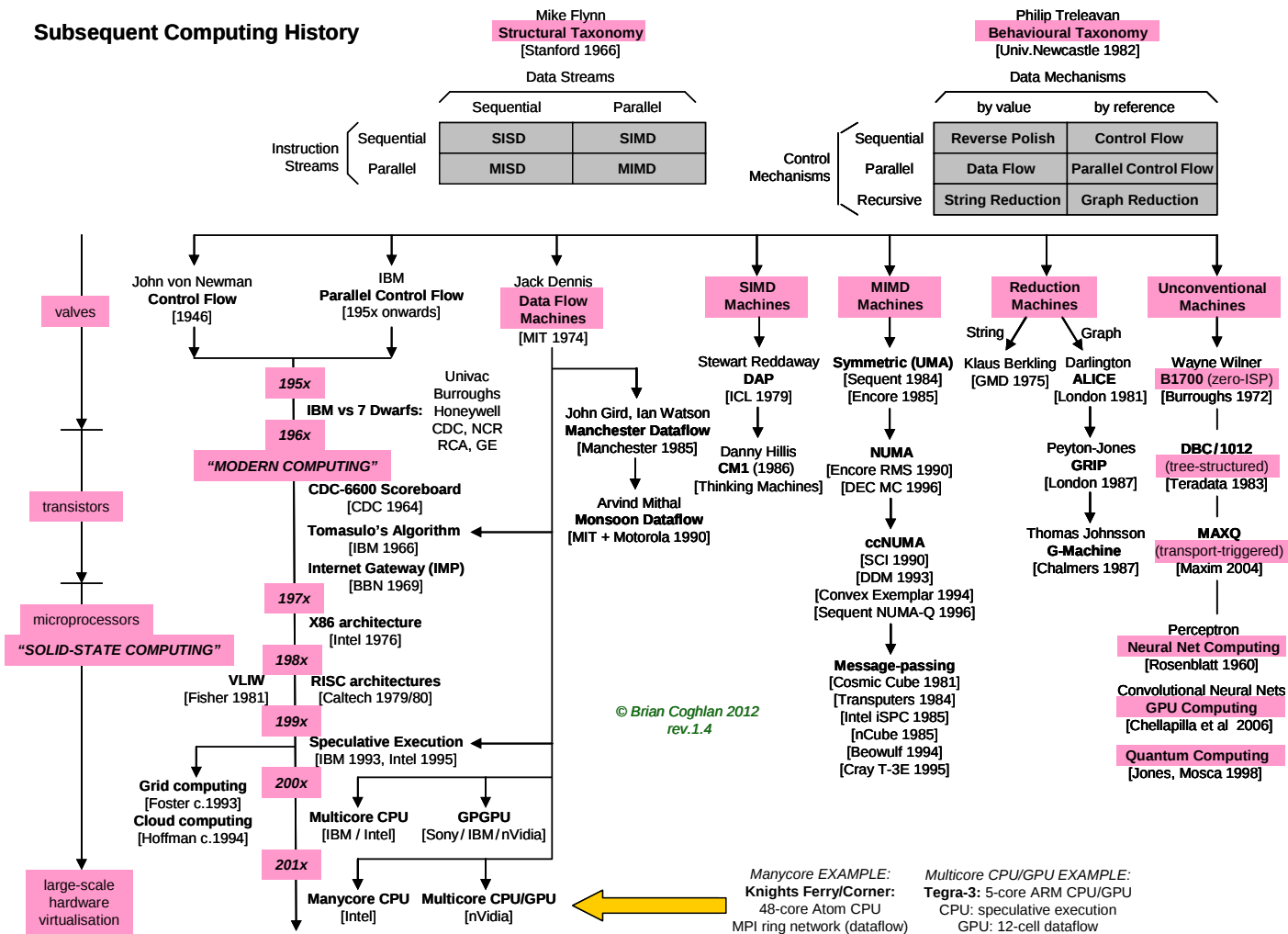


Figure 5: Computing History: The endless fight against tractability, its subsequent evolution.

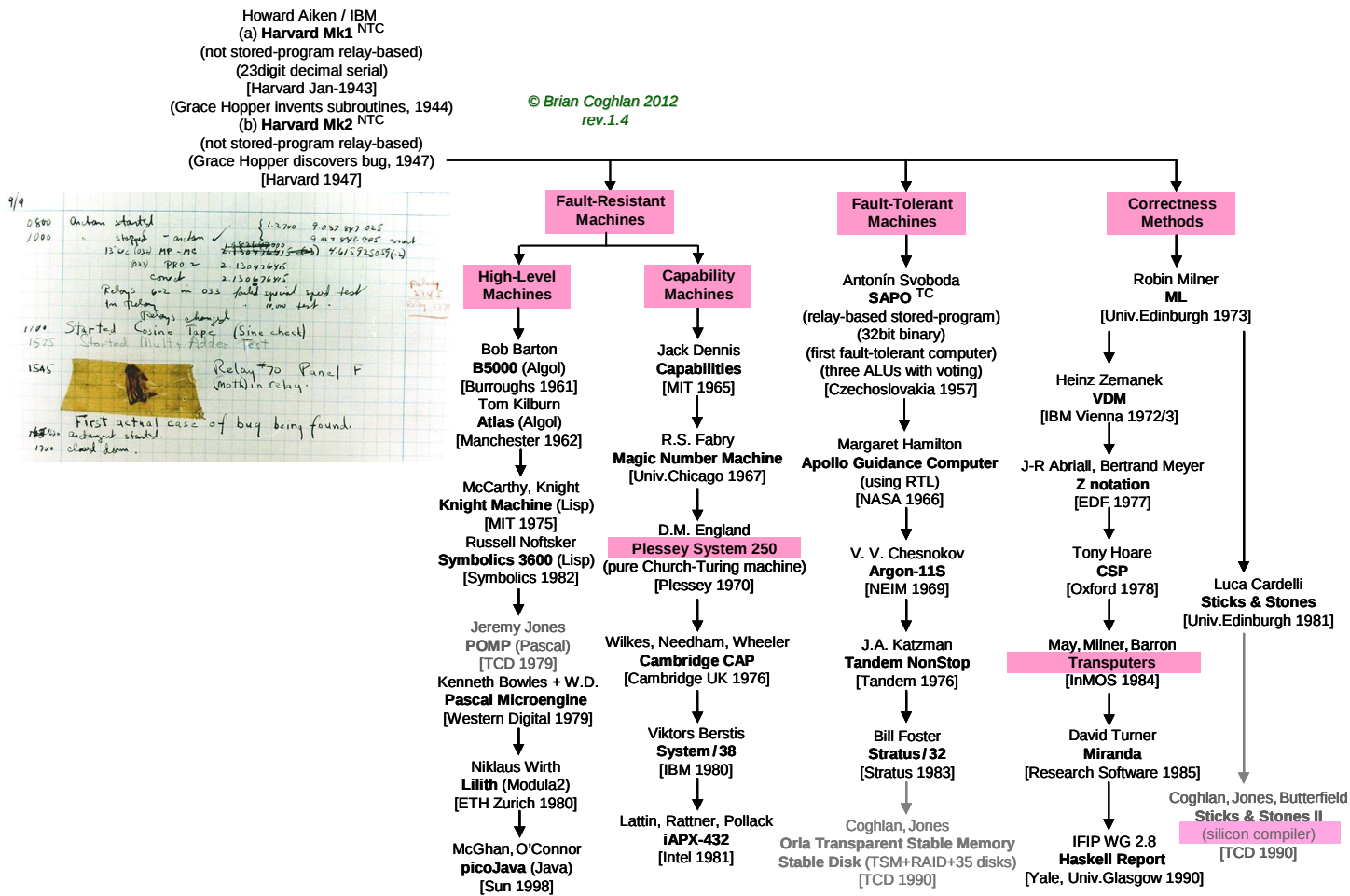


Figure 6: Computing History: The endless fight against errors after Grace Hopper discovered the first bug.