

Milestone-Proposal: The Atlas Computer and the Invention of Virtual Memory

I have read the submission from Professor Muttram and others. I find the written arguments to be fair and truthful. However, the evidence presented does not establish the claim for the “invention” of virtual memory. Virtual memory is a foundation technology for which there is no single inventor. The fact that other developers knew and cited the Atlas does not establish that they would not have arrived at the same end without the precedent of Atlas.

Hence, the title of the proposed milestone

“The Atlas Computer and the Invention of Virtual Memory 1957-1962”

is too strong a claim. I would advise something like:

“The Atlas Computer and the First Demonstration of Virtual Memory 1957-1962”

or

“The Atlas Computer and the One Level Store, the First Demonstration of Virtual Memory 1957-1962”

Two examples reinforce this argument.

Example 1

According to Knuth and Trabb Pardo’s “Early Development of Programming Languages” (1976), Alec Glennie developed the first programming language for a stored program computer at Manchester University in 1952. It would therefore be fair to claim that “Glennie developed the first programming language 1952”, but it would be an over-claim to say that “Glennie invented programming languages 1952”.

Example 2

There are in the UK three plaques celebrating John Logie Baird who invented an early form of television, in fact called the televisor. None of the plaques claim that he “invented” television. Here are the inscriptions:

John Logie Baird 1888-1946 Television pioneer lived here

In 1926 in this house John Logie Baird 1888-1946 First Demonstrated Television

John Logie Baird 1888-1946 Inventor of the Worlds First Working Television System

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I conclude by stating that the proposers have made a compelling case for this milestone. I am only suggesting a modification of the wording.

The inclusion of Tom Kilburn FRS after the citation is fully justified. He ranks alongside Alan Turing FRS and Maurice Wilkes FRS. These were the only three computer pioneers in their generation to be elected to the Royal Society.