

PRESS RELEASE

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Canadian Computer "Thinks" - Then Answers in Welsh!

Science came a small step closer this week to understanding how the mind really works, with the first successful trial of the *Konrad* system, a radical new approach to artificial intelligence computing being developed at University of Wales Institute, Cardiff.

Built around a specially designed network database, the *Konrad* software was able to "think" in a rudimentary way about a test sentence, and then respond appropriately to it.

What made the trial particularly significant was the fact that the software responded in Welsh to a question put to it in English. Given the input "Tell me about yourself", the machine replied *Konrad y Peiriant ydw i, beth a hoffech chi ei wybod* (roughly, "I'm *Konrad* the Mechanical, what would you like to know").

The *Konrad* system is a collaboration between Derek J. Smith, a lecturer in UWIC's School of Health Sciences, and John T. Abell, a systems engineer at International Software Products, Toronto. It is named after the German computer pioneer Konrad Zuse.

Mr. Smith attributes the software's ability to behave in a comparatively lifelike manner to the fact that its basic design incorporates many of the known features of the human mind. "To the best of our knowledge," he explained, "the mind is grounded in a network of distributed memories accessed in strict logical stages, and so I designed *Konrad* to simulate both the network and the stages."

Mr. Smith warned, however, that the project still had a very long way to go. "The *Konrad* database is nowhere near as complex as it will eventually need to be," he stressed, "and the task for the coming months is to increase the system's language skills until they start to display the sort of self-directing qualities which characterise human cognition."

Konrad's application platform is Computer Associates' CA-IDMS (Release 16) network database, the latest and most powerful version of a long line of network databases going back to the late 1960s. The database is accessed using COBOL applications executed

under IBM's flagship mainframe operating system z/OS (Version 1.8) running on an emulated z System under FLEX-ES.