Article
Robert Cemper · Aug 26, 2017 3m read

From The Roots to InterSystems

This is a rather personal view of the history before Caché.
It is in no sense meant to compete with the excellent books from Mike Kadow discussed in an earlier article.
We have different histories and so this is meant to create a different perspective of the past.

The whole story started in 1966 at **MGH** (Mass.General Hospital) on a **PDP-7** Ser.#103
with 8K of memory (18-bit words) [*today = 18K byte*] as a spare system.

"Serial Number 103 - was located in the basement of the now demolished Thayer Building,
currently *[2014]* the site of the Cox Cancer Center at MGH."
"Neil Papparlardo and Curt Marble under the guidance of Octo Barnett developed and released
the initial software on this machine."
They named it MUMPS. (source)

PDP-7

The language itself was rather close to old-style Basic.
But there were remarkable improvements over other programming languages:

- The **big idea** was to store and retrieve persistent data without the need to deal with a file system. This was an enormous step forward at that time compared to other systems where storing and reading persistent

data could easily take 30%+ of your available memory and no idea if sorting, indexing, ...
- No strong data types anymore or data types imposed by names (ALGOL, FORTRAN, ..) an endless source for formal errors and conversions.
- Dynamic (sparse) arrays without frozen structure and pre-allocated half-empty space in memory
- Indexing persistent data with variable-length structured indices (subscripts) allowing easy sorting, grouping, subgrouping,..

You may want to compare it to old code in COBOL, FORTRAN or PL/1 to estimate the dimension of that revolution.
The new software took its way along fast-moving hardware development until it reached PDP-11
and was finally known as MUMPS 4b.

1978 was a remarkable year:
- InterSystems was founded by Terry Ragon
- DEC rolled out its first VAX-11 Cluster (at Carnegie Mellon ?)
- DEC completed DSM-11 (Digital Standard Mumps) :
  Besides following the rather fresh standard it had new Global Module
  that improved storage performance radically.
  It easily outperformed any other DataBase named product by magnitudes.
  The author of this Global module was a brilliant engineer with international experience: Terry Ragon.
- I myself joined DEC also in 1978 as Sales and Support Engineer for DSM-11
  meeting Terry at the first support training in Maynard.

DEC at that time was completely high with the new VAX-11 and the VAX-Cluster.
The new high-performing DB was ignored and its power totally misunderstood.
All requests from software developers to have DSM native on VAX to take advantage of the new box were ignored.

This persistent ignorance of customer requests was the base to encourage a customer of mine to invite me:
"*If they don't do it join us and we will do it !*" [*How often have you got the offer to write an OS like this from scratch?*]
I just couldn't resist and I joined and we wrote it up from point zero on bare-boned VAX-750.
The OS was named VISOS and lived as long as the supported VAX models existed.

Some time later DEC presented DSM as a layered product on top of VMS.
In the beginning, performance was dictated by the underlying RMS and didn't reflect the gain in processing power.
It moved out of my scope and I didn't care about it anymore.
Years later the best on my opinion that DEC did was: They sold its unloved product DSM to InterSystems.
Not too long before they were sold themselves.

When I joined InterSystems 20 years later I found in Caché again so many details I had implemented myself.
So I could enjoy a very warm feeling of being at home.

Caché is today far far away from all its predecessors but still source compatible.
The power of Globals is still there. There might be only a few constellations where you
can't outperform a competing DB. My favorite example out of many others:
GAIA Project run by European Space Agency (ESA)

This is obviously a quite personal perspective into technologic history and part of a personal story.
If you have questions or feel the need to correct me you are welcome.
With my location in Vienna (Austria) I always had the impression to watch
decisions in Cambridge, Maynard, Boston from far far away at the border of the Milky Way.

#Caché #InterSystems IRIS