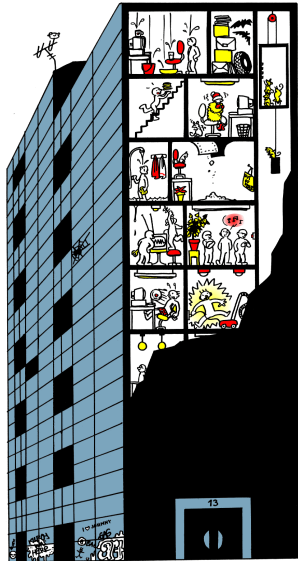


# Moving a Valuable Heritage to the Network Computing Architecture

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## The problem

Hospital Information Systems are like buildings – hundreds of people live "in" them each day. **If you let your HIS dilapidate**, you will ultimately need to scrap everything down and build a new one. Meanwhile, decaying shacks are quite unpleasant for the dwellers...

## The case: VA type HISs in Finland

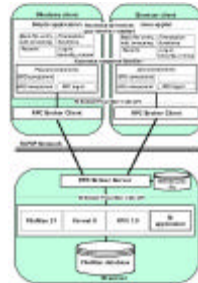
The majority of hospital information systems in Finland are based on the FileMan DBMS of the U.S. **Department of Veterans Affairs (VA)**.

The architecture and user interface of the systems are becoming outdated. The **FileMan database** technology, however, is highly efficient and cheap – **worth being retained**.

The University of Kuopio with some hospitals and vendors established the FixIT project to develop a **stepwise migration strategy** to the 21st century. The objective was to move to client/server architecture and graphic user interfaces (GUI) while conserving as much of prior investments as reasonable.

## Migration tools: to Windows ...

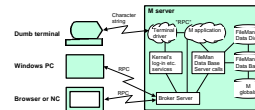
The VA provided the Remote Procedure Call (RPC) Broker technology to link FileMan databases with Windows clients. Inprise's Delphi was used as the GUI tool.



We developed a **toolkit of high-level components** which make systems development dramatically faster than with VA's low level components – "**drag, drop and click**".

## ... and to web browser/Java

Since web browsers are becoming a *de facto* user interface standard, we are developing a functionally **equivalent set of high-level Java components** for a *thin client* interface to FileMan databases.

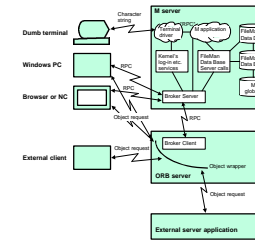


With the Delphi-FixIT and Web-FixIT tools, you can use **dumb terminals**, Windows clients and web browsers to access the same database and server application, with minimum "spaghetti programming" on the client side.

The Delphi toolkit is in use, the Java toolkit in a prototype phase.

## Further to distributed objects

The planned next step on the migration path is to open up FileMan-based applications to the outside world by encapsulating the application functionality into **distributed objects**.



When all functionality has been encapsulated piece by piece, it will be relatively easy to replace even the FileMan DBMS by an **Object Database**, without modifying the other layers – around year 2005.



## The solution

Hospital Information Systems are like buildings – hundreds of people live "in" them each day. **With periodical planned renovation**, you can keep a medieval castle or a heritage HIS always livable and equipped with all the nice modern conveniences.

For more information, see the HIMSS proceedings and [www.uku.fi/atkk/fixit/english.html](http://www.uku.fi/atkk/fixit/english.html)