



### **GT.M Update**

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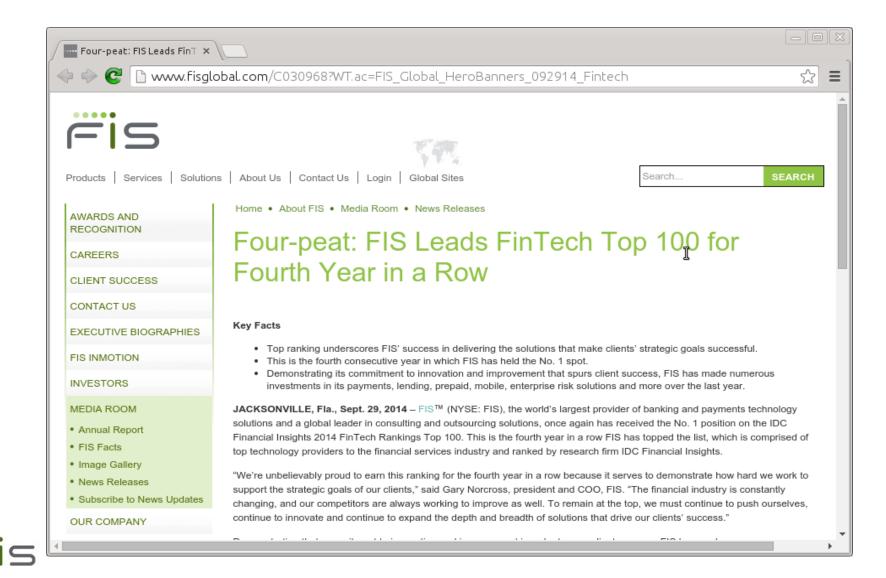
## Overview

- Business
- Releases



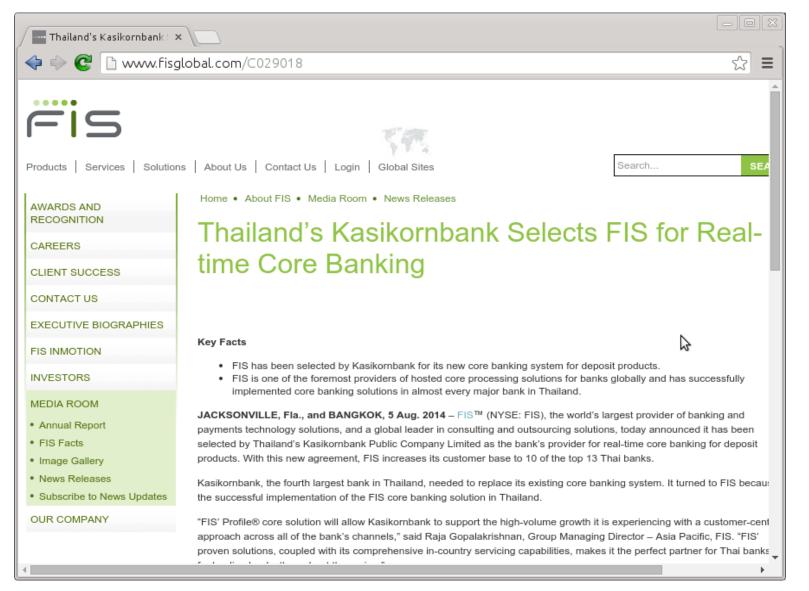
# FIS – FinTech Top 100





#### FIS Profile - Kasikornbank

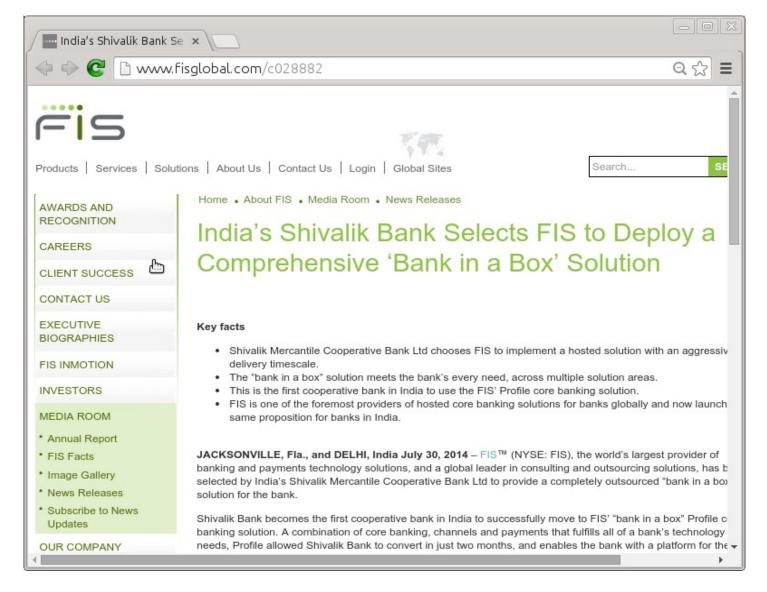






#### FIS Profile - Shivalik Bank







### EHS – Hakeem rollout

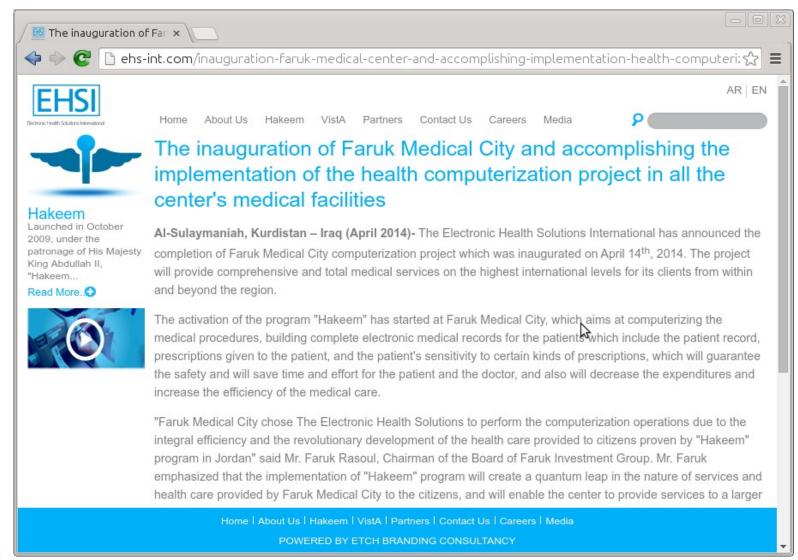


• Others in the conference have a lot more to say on this topic



#### EHSI







#### Releases - V6.2-000



- Auto-relink field test grade functionality
  - (Now production grade in V6.2-001)
- Encrypted file, pipe and FIFO IO devices
- Pass sockets between processes
- And more...



#### Auto-relink



- Processes can "subscribe" to updates to automatically link & execute latest published versions of routines in directories
  - e.g., myApp/o\*(myApp/r)
  - Relink recursive to relink routines already on execution stack
- Other process can "publish" updates
  - Explicitly, e.g., ZRUPDATE "myApp/o/XYZ\*.m"
  - Implicitly, by linking from directory to which it has subscribed

#### Notes

- 64-bit only 32-bit accepts \* suffix for code compatibility
- Relink control files may require increase in kernel.shmmax parameter



# Encrypted file, PIPE, FIFO IO



- Plugin architecture GT.M has no cryptographic software
  - Encryption plugin API significantly enhanced
  - Customized plugins must be reworked
- Protect data at rest other than in databases
- Keys identified in files section of configuration file pointed to by \$gtmcrypt\_config
- KEY / IKEY / OKEY & IV device parameters
  - Initialization vector (IV) exactly 16-bytes
  - SEEK not supported for encrypted files



# Pass sockets between processes



- Functionality for a client and a server to add additional TCP connections, e.g.,
  - Client & server have initial / existing connection, decide to add another
  - Server creates identifier (e.g., pid, or random number associated with pid in database) & shares with client
  - Client initiates new connection, e.g., through xinetd, to start intermediate process which communicates with client and receives identifier of server process
  - Intermediate process passes connection to server process
- With websockets and HTML5, good for creating rich user interfaces



#### Other enhancements in V6.2-000



- \$ZSOCKET() information on SOCKET devices
- \$ZSYSLOG() send a message to syslog
- i586 instruction set GT.M runs on Intel Galileo
- \$PRINCIPAL can be a LOCAL socket
- Up to date online help
- SEEK device parameter for files
- and more...



#### Releases - V6.2-001



- Auto-relink now production grade
- Triggers can be used on global variables that span regions
- TLS support for SOCKET devices
  - TLS is extremely complicated and we may not have thoroughly tested all user stories (use cases)
- MUPIP LOAD automatically detects file format
- JOB parameter to pass local variable context
- Restrict "batch" processes to subset of global buffers to limit impact of interactive / online processes
  - Field test grade functionality
- and more...





### Thank You

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