

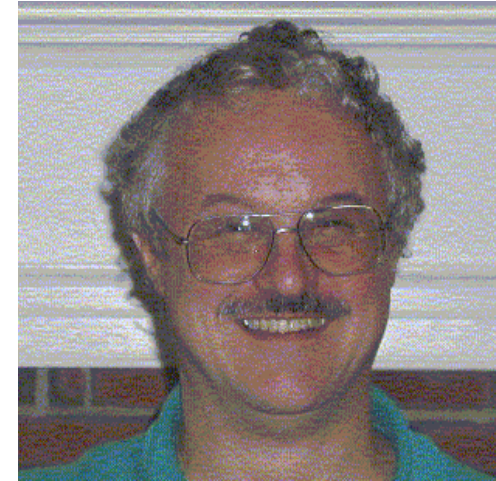
# *KICKS* for CMS

[www.kicksfortso.com](http://www.kicksfortso.com)



KICKS for CMS, VMworkshop 2013

# Mike Noel, Juneau Alaska



- 30+ years systems & application development experience with MVS, CICS and DB2.
  - Developed **KICKS** for TSO using Hercules, TurnKey MVS, and GCCMVS beginning in 2008; first published in 2009.
- Newcomer to VM/CMS.
  - Ported **KICKS** from TSO to CMS last year.
- 10+ years Linux experience, but none with zLinux.
  - Currently porting **KICKS** from TSO/CMS to zLinux.

# **KICKS** Overview

- **KICKS** is a free enhancement for CMS & TSO that lets you run your 3270 CICS applications directly instead of having to 'install' those apps in CICS. You don't need CICS installed on the system to use **KICKS**.
- **KICKS** provides a high level of source code compatibility with CICS. You can migrate applications either way between CICS and **KICKS** simply by recompiling.
- **KICKS** supports file sharing. CMS users can share vsam files or database tables without doing anything special.
- Being CMS based (ie, single user per instance), **KICKS** can't support thousands of users on a single system as CICS (many users per instance) can. But it can support a few hundred users even on the smallest emulator systems, and if having separate instances means it can't run as many users it also means those users aren't so tied to each other's fates - one user's crash doesn't affect anybody else.
- **KICKS** requires no special systems or security services and can be easily installed by a single applications programmer with a CMS account.

# What's CICS?

- An IBM program product for z/OS and z/VSE (and some non-mainframe systems) that provides an efficient mechanism for online user access to data hosted on those systems.
- Been around since the mid 70's. Google “Bob Yelavich” for interesting history...
- Many, many legacy systems (mostly 3270 COBOL vsam) coded for the CICS api.

# *Why would you want to run CICS apps outside of CICS?*

- Fast, easy development without need to involve CICS support staff for routine tasks.

*Instant move to CICS later if desired.*

- Easy remote distribution/demo/installation.
- Supports requirements for use of non-CICS api's that might impact CICS reliability.
- Encourages offload of low volume apps that generate excessive CICS support effort.

# **KICKS** Installation

- Download the install package from internet.  
*User's Guide (html local copy) included, but most up-to-date version always online at [kicksfortso.com/gold/CMSUser's Guide](http://kicksfortso.com/gold/CMSUser's Guide)*
- Unzip the install package.
- Upload the vmarc archive from the install package to your CMS account and unpack it.
- Build the VSAM environment.
- Start **KICKS**.

# Where the Install puts Everything

**KICKS** uses TXTLIB' s, MACLIB' s and VMARC' s to compensate for the lack of PDS' s in CMS.

– TXTLIB' s (object code)

*VM/370 doesn't really support LINKLIB' s, so **KICKS** uses TXTLIB' s instead. TXTLIB objects built by **KICKS** exec' s are fully resolved and **KICKS** uses them just like load modules in MVS.*

- KIKULOD, KIKSLOD – user & system tables.
- KIKURPL, KIKURPL – user & system maps and programs.
- KIKSAMPL – maps & programs for samples.

# Where the Install puts Everything

- MACLIB' s (source for 'include' s and 'copy' s)
  - OSVSAM38 – vsam assembly macros (for VM/370).
  - KIKTABLE – table assembly macros.
  - KIKCOBCP – COBOL library for control block expansions.
  - KIKCOUSR – COBOL symbolic maps for user programs.
  - KIKCOSYS – COBOL symbolic maps for system programs.
  - KIKGCCCP – GCC library for control block expansions.
  - KIKGCUSR – GCC symbolic maps for user programs.
  - KIKGCSYS – GCC symbolic maps for system programs.



# Where the Install puts Everything

- VMARC' s (sample and test program source)
  - COB, CB2 – COBOL and COBOL2 source for samples.
  - MAPSRC – BMS map source for samples.
  - TESTCOB – COBOL/COBOL2 source for test programs.
  - TESTGCC – GCC source for test programs.
  - TESTFILE – COBOL source for vsam test programs.

# Configuration

- Tables
  - CICS-like SIT, PPT, PCT, DCT, FCT
  - VSAM file sharing configured in the FCT
- EXEC' s
  - KICKS 'startup' EXEC
    - Calls 'KICKSD' EXEC for VSAM dlbl' s
  - Various app compile EXEC' s (maps, programs)
  - Table assembly EXEC' s

# Operation

- File sharing
  - Non-vsam files for **KICKS** operations can be shared read-only by multiple logged on CMS users.
  - VSAM file sharing controlled by FCT parameters.
- Using **KICKS** non-interactively (batch)
  - CRLP (sequential terminal)
    - Full 3270 emulation*
  - TKICKS and TKICKSD EXEC' s

# Programming

- Generating BMS maps
  - KIKMSD, KIKMDI, KIKMDF macros like the familiar DFHxxx macros; will accept DFHxxx as well.
  - KIKMG exec to compile symbolic & object map.
- Compiling COBOL programs
  - “EXEC KICKS” calls like “EXEC CICS” calls; will accept “EXEC CICS” as well.
  - KIKCOB2CL exec to compile/link program (z/VM).
  - K2KCOBCL exec to compile/link program (VM/370).

# Programming

- Compiling C (gcc) programs
  - Free C compiler for MVS & VM, with public domain library (PDPCLIB)  
<http://gccmvs.sourceforge.net>
  - KIKGCCCL exec to compile/link programs (both).
- the **KICKS** (CICS) api
- Use of language features (or foreign api' s) not supported in real CICS

# Debugging

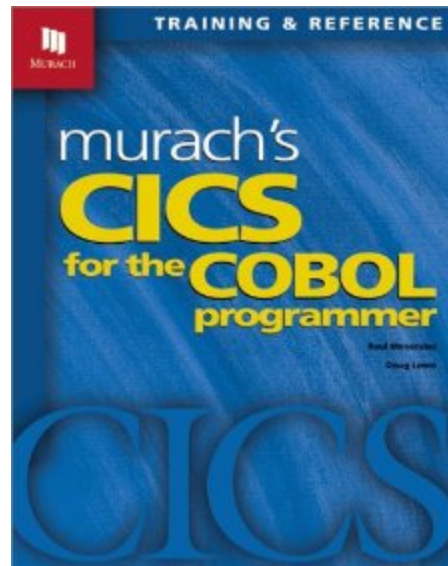
- Transaction Dumps
  - Much like CICS' s: control blocks & data areas, trace table, psw & registers, program storage, ...
- Trace Table
  - Also like CICS' s but easier to read (just one task)!
- non-CICS api's
  - Standard I/O (printer, console, ...) all available.
  - Standard compiler debug tools available.

# Debugging

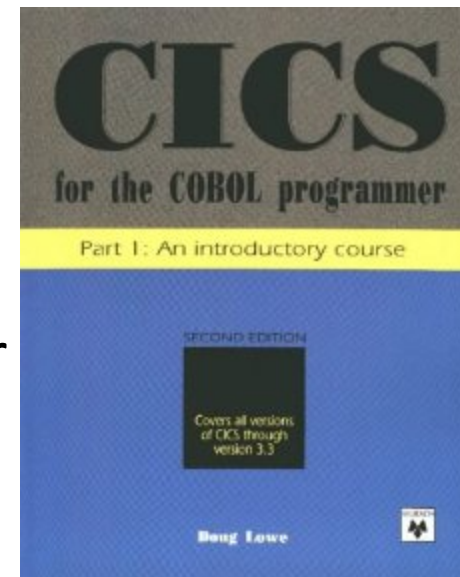
- KEDF
  - Similar to CICS' s **Execution Debug Facility**.
  - Breaks before/after each **KICKS** api call.
  - Formatted display of the api call, arguments, results and various control blocks (EIB, trace table, user storage, CWA, TWA, TCTTEUA, ...)
  - Excellent user screen restore.
  - API call filtering to select subset of api calls.

# Sample Programs

- Murach examples



or



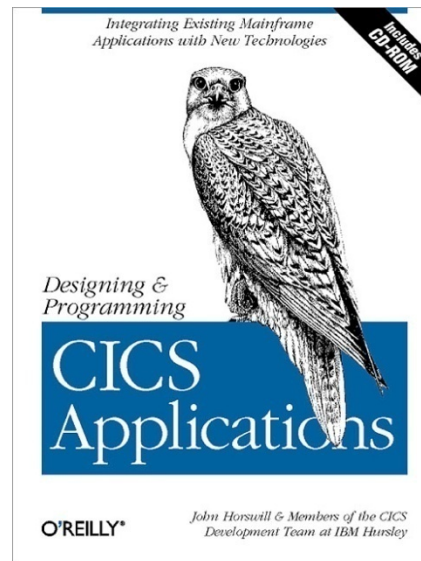
examples from [www.murach.com/books/mccp/download.htm](http://www.murach.com/books/mccp/download.htm) (with minor fixes).

- TAC example



# Sample Programs

- the O' Reilly book...



Some good sample programs on CD that comes with the book, but the best thing on the CD is the (nearly) complete set of CICS 3.0 manuals in pdf format.

- and, if you also license CICS, it's own sample programs.  
Google "Mining Gold from IBM supplied CICS samples" (a SHARE presentation).

# Support

- Yahoo forum for free support
  - [tech.groups.yahoo.com/group/kicksfortso](http://tech.groups.yahoo.com/group/kicksfortso)
- Conversion assistance and ‘Per Incident’ support available.

# Futures

- VSAM alternative
- **KICKS**pro for CMS
  - Large screen support
  - Shared intrapartition TD
  - Handle ABEND
  - ‘Occurs’ in BMS maps
  - Shared TS
- **KICKS** for zLinux
  - OpenCOBOL
- **KICKS** for “the Cloud”?
  - Server-side JAVA app

# Questions?

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