Forth Workstations

Attendees: Doug Ross (chairman), Jim Rash (secretary), Rieks Joosten, Bent Schmidt-Nielsen, Tom Sargent, Tom Harkaway, Walt Pawley, Alan Furman

- Hardware/Architecture
- Topology
- I/O
- Processor
- Bus Structures
- Networking
- Graphics Storage - optical disk, floppies, etc...
- Specific Engines - Postscript, Graphics, Disks, DSP

- Object-oriented languages
- Applications
- Operating Environment/Software
- Interface Methodology - Icon, Keyboard, Mouse, etc...
- Storage - files, screens, database, etc...
- Interactiveness - at what level, to what level
- Standard tools - graphics support, editors, etc... Forth Standards
- Portability

Doug - Need tool for NASA/Goddard work; does not want to program (that's just a means) target 5 yr. development, 10 yr. development.
Tom S. - Must interface to mainframes?
Doug - Yes, but Goddard Space Flight Center and NASA organizations are very autonomous and have many different computers.
Alan - Why not use existing work stations?
Doug - 1) target hardware = developing hardware 2) smarter, more capable systems
Jim - Fallout from workstation development will benefit Forth community as a whole; Forth ways turned to hardware.
Doug - Robustness of application is important.
Tom H. - VME Forth engines on a board (Winfield's Metaforth).
Alan - CPU32 is available. Objective - to achieve a relevant environment. Segmented architectures create hassles and constraints. Linearity of workstation counts more than speed. Should develop on 68000 and port to 32-bit Forth processors when available.
Bent - Novix has money problems. 32-bit chip unlikely unless it is funded from outside. QSD would love to do it.
Alan - Must have 32-bit.
Doug - Hardware issue is unimportant right now.
Jim - What if we conclude no 32-bit Forth engine is to become reality?
Tom S. - NASA could bring this hardware into being.
Doug - Desire common means of communication.
Bent - Use Postscript as common interface.
Tom S. - Nifty concept in Postscript, but complex and slower than other ways. GKS, IGES, etc..., have disappeared.
Walt - Postscript is going to be around awhile.
Tom S. - Computer aided design via Postscript would be very slow.
Doug - Use Postscript as common interface like Esperanto is used going from French to Esperanto, to Polish.
Rieks - The problem is neither hardware nor software, rather people. Illustration: PSD has been using Wordstar. I found WordPerfect, now after a long time we've switched over from Wordstar to WordPerfect. Another problem: Forth permits user to make significant changes in itself, so your workstation environment will be changed by each user according to some device, making difficulties for others. In this way people are the problem.
Alan - This is the same with LISP.
Doug - What the user does with his own workstation is up to him, but for communication he must conform to the standard interface (Postscript).
Rieks - Can anything be enforced?
Jim - Probably not at NASA, not even from the top down, but Space Station needs may dictate some standard uniformity. How do we get from here to final result? Could there be a cooperative project with sharing of results in public domain?
Walt - Doubtful.
Doug - Jim and I will serve as a clearing house and center for development.
Bent - Practical suggestion: start with Sun III with VME as a starting platform.
Alan - Use the FIG access on GENIE.