

Current PRISM OS Strategy

- **Two system strategy:**
 - **PRISM ULTRIX. "World-class" implementation of industry-standard system targeted at workstation and technical marketplace**
 - **Mica. Proprietary operating system that addresses commercial system requirements, VMS compatibility, contemporary computing concepts, and extensibility.**

- **PRISM operating systems share in the short-term:**
 - **Languages and layered products**
 - **AIA and DECwindows**

- **PRISM operating systems share in the long-term:**
 - **Service strategy and on-line diagnostics**
 - **Operating system components**

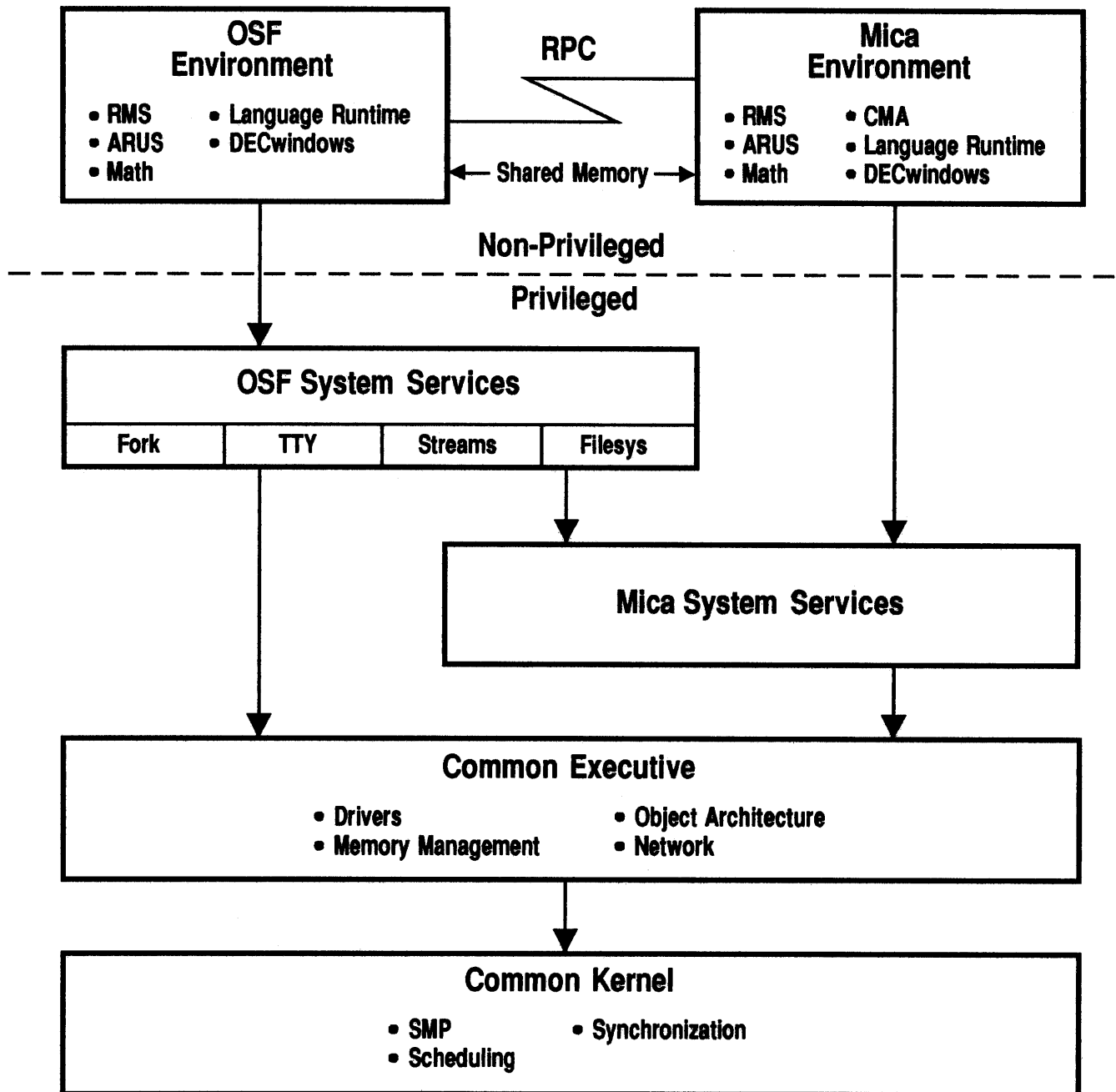
Key Concepts of New Proposal

- **Implement OSF and Mica/VMS capabilities with a single set of operating system software.**
- **Integrate at the program execution level rather than the session level - you run programs in an environment.**
- **Separate UN*X execution environment, objects, and abstractions from Mica counterparts.**
- **Structure so that compatibility tradeoffs between UN*X and VMS are not necessary.**
- **Do not attempt to make UN*X concepts available to Mica programs and vice versa.**
- **Do not attempt to share everything simultaneously.**

Problems with Previous Effort

- **Attempted to integrate at the session level - you logged into an environment.**
- **Attempted to fully integrate UN*X concepts with Mica concepts in a unified way.**
- **Attempted to totally share all objects and abstractions of the two systems.**
- **Attempted to make all UN*X concepts available to Mica programs and vice versa.**
- **Were forced into making tradeoffs of VMS compatibility versus UN*X compatibility.**

New System Structure



Common Executive Components

- **System management, system bootstrap, and security.**
- **Memory management, object architecture, and process structure.**
- **Device drivers, on line diagnostics, and error logging.**
- **DECnet and DECwindows.**
- **High reliability file system that is compatible with both UN*X and VMS.**
- **SMP and scheduling.**

Features

- **Absolute OSF compliance without impacting the design of Mica.**
- **No need to make tradeoffs in favor of either OSF or VMS - both can be accommodated equally.**
- **Database, enhanced security, availability, and other industrial grade features available to both environments.**
- **Maximum leverage of software development resources - Digital's products all run in Mica environment, but are freely usable from OSF environment.**
- **Common DECwindows and AIA support.**
- **Common language runtime environment (e.g. math library, RMS, ARUS, etc.)**
- **Mica protected subsystem functionality available to OSF programs as well as Mica programs.**

Benefits

- **One system with two execution environments versus two systems with shared components.**
- **OSF not second class citizen - compute performance equal to Mica.**
- **Layered product development, testing, and certification on a single system.**
- **Field support personnel only need to be trained on a single system.**
- **SMP and other Mica capabilities available to OSF environment day one.**
- **Quality system management and network support.**

Open Questions

- **What is the OSF operating system standard - XOPEN and POSIX?**
- **What about VAX ULTRIX compatibility, Berkeley UN*X compatibility, SVID compatibility?**
- **What should be done about UN*X concepts that compromise security (i.e. set UID and set GID)?**
- **What about Sun tools - Yellow Pages, RPC, etc.?**
- **What should we do about multithreading? UN*X doesn't have it - we could provide it - but why?**
- **Will an OSF system that is not pure UN*X be saleable in the UN*X market?**