

WHICH MANAGEMENT TECHNOLOGY?

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SNMP

- **THE “ASSEMBLY” LANGUAGE OF MANAGEMENT**
- **OBJECT-BASED STRUCTURE OF MANAGEMENT INFORMATION (SMI), RUDIMENTARY BULK TRANSFER, NOT ADEQUATE EVENT MODEL, V3 ADDRESSES SECURITY**
- **SIMPLE, UBIQUITOUS, COMPROMISE BETWEEN WHAT IS POSSIBLE AND WHAT PRAGMATIC**
 - **REFLECTS THINKING OF THE IETF COMMUNITY**
- **SURVIVES WELL IN AN ERA OF DISTRIBUTED OBJECT-ORIENTED SYSTEMS**

OSI-SM AND CMIS/P

- **OBJECT-ORIENTED SMI, POWERFUL RETRIEVAL AND EVENT MANAGEMENT FACILITIES, SCALABILITY**
- **GDMO DIFFERENT TO GENERAL PURPOSE OBJECT SPECIFICATION LANGUAGES, COMPLEX, BULKY INTERFACE SPECIFICATIONS WITH LOTS OF OPTIONS**
- **OSI UPPER LAYER PROTOCOLS REQUIRED, NO SOFTWARE PORTABILITY YET DESPITE THE TMF TMN/C++**
- **USED IN TMN ELEMENT & NETWORK MANAGEMENT**
- **HAS ITS NICHE BUT IT IS FAR FROM BEING THE UBIQUITOUS TELECOMS MANAGEMENT SOLUTION**

OMG CORBA

- **GENERAL PURPOSE DISTRIBUTED OBJECT TECHNOLOGY, MULTI-LANGUAGE MAPPINGS, USER-FRIENDLY APIS**
- **COULD BE USED FOR NETWORK MANAGEMENT, EVENT MODEL?, BULK TRANSFER?, SCALABILITY?**
- **JIDM DEFINED SNMP AND CMIS/P TO CORBA MAPPINGS, GATEWAYS NOT YET USED**
- **BEST FOR SERVICE CONTROL AND SERVICE MANAGEMENT**
- **X.703 OPEN DISTRIBUTED MANAGEMENT ARCHITECTURE (ODMA) INCLUDES CORBA PROFILE, WILL BE A LEGITIMATE SOLUTION FOR TMN INTERFACES**

JAVA AND WEB-BASED MANAGEMENT

- **JAVA RMI: ANOTHER TECHNOLOGY FOR DISTRIBUTED JAVA OBJECTS - ALSO JMAPI**
 - **PERFORMANCE?, THE DISTRIBUTED WORLD IS HETEROGENEOUS I.E. NOT ALL OBJECTS ARE IN JAVA**
- **IS WEB-BASED MANAGEMENT ANYTHING OTHER THAN A WEB-BASED USER INTERFACE?**
 - **USEFUL, MOSTLY IN CONJUNCTION WITH OTHER TECHNOLOGIES, HTTP *NOT* A MANAGEMENT PROTOCOL**

DMTF, DEN

- **DMTF ADDRESSED INITIALLY DESKTOP MANAGEMENT, NOW TRIES TO BE A GENERAL DISTRIBUTED MANAGEMENT SOLUTION**
 - **YAMF - YET ANOTHER MANAGEMENT FRAMEWORK**
- **DIRECTORY ENABLED NETWORKS (DEN) - CISCO AND MICROSOFT DISCOVER THE OSI DIRECTORY & SERVICE MANAGEMENT!**
 - **AN APPROACH TO SERVICE MANAGEMENT POLICIES THROUGH ACTIVE DIRECTORY OBJECTS**

MOBILE AGENTS

- **PROMISING NEW TECHNOLOGY, MOVE LOGIC AROUND THE NETWORK TO PERFORM LOCAL INVOCATIONS**
- **POTENTIAL NON-FUNCTIONAL ADVANTAGES OF PERFORMANCE, REDUCED TRAFFIC ETC.**
- **CAN THEY SUPPORT NOVEL MANAGEMENT SERVICES THAT COULD NOT BE SUPPORTED OTHERWISE?**
- **THEY WILL BE MOSTLY USED TOGETHER WITH OTHER DISTRIBUTED MANAGEMENT TECHNOLOGIES, NOT A PANACEA**

THE FUTURE

- **TRADITIONAL MANAGEMENT SOLUTIONS WILL CO-EXIST WITH NEW ONES**
- **EMPHASIS WILL MOVE TOWARDS “OPEN” MANAGED ELEMENTS WITH APIS THAT CAN SUPPORT CUSTOM MANAGEMENT AND CONTROL ARCHITECTURES**
- **DISTRIBUTED MANAGEMENT SYSTEMS WILL BE CONSTRUCTED FROM REUSABLE COMPONENTS**
- **IMPORTANCE OF TECHNOLOGY-INDEPENDENT O-O META MODEL FOR INFORMATION REPRESENTATION**