

# **System Performance Monitor/2 2.0**

**Austin, TX**

## **System Performance Monitor/2 Ver. 2.0**

- **Workstation Performance**
  - ▶ **Individual Applications and Workstations**
  - ▶ **LAN Servers and Clients**
- **Components of Performance**
  - ▶ **CPU**
    - **How Much**
    - **Where**
      - **Application**
      - **System**

## **System Performance Monitor/2 Ver. 2.0**

### **■ Components of Performance**

- ▶ **Input/Output**
  - Frequency
  - Location
  - Service Time
- ▶ **Memory**
  - System
  - Application Code
  - Application Data
  - Working Set

## **System Performance Monitor/2 Ver. 2.0**

### **■ SPM/2 Components**

- ▶ **Data Collection**
- ▶ **Data Logging and Graphing**
- ▶ **Data Reporting**
- ▶ **Memory Analysis**
- ▶ **Directory Analyzer**

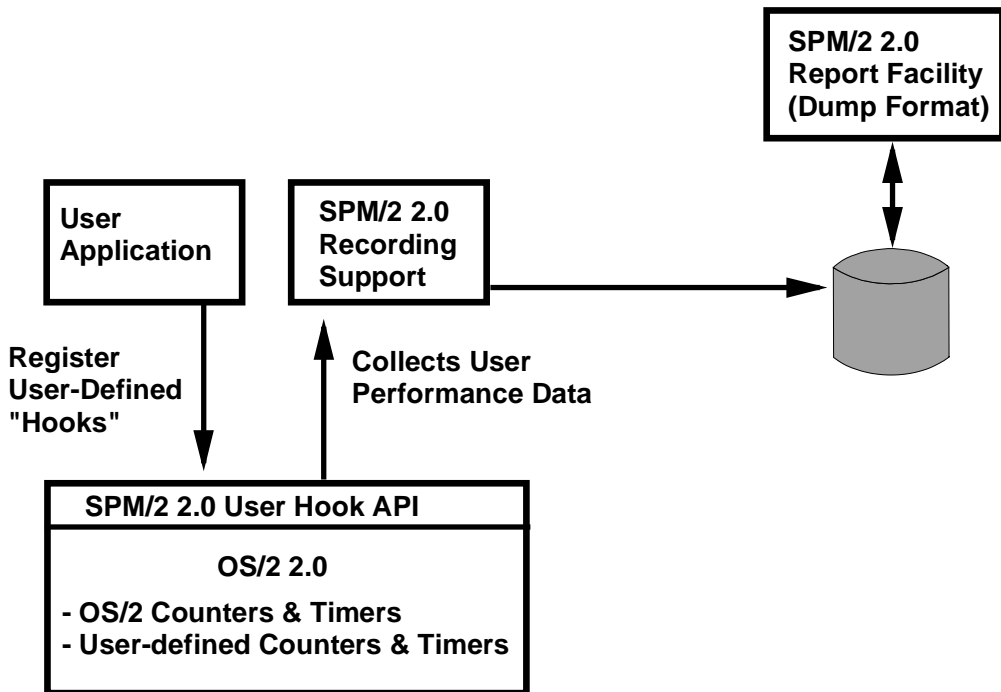
## **SPM/2 2.0 Application Support**

- **Command Line Interface**
  - ▶ **Start/Stop Data Collection Facility**
  - ▶ **Start/Stop Monitoring Sessions**
  - ▶ **Run Reports**
- **Application Programming Interface (API)**
  - ▶ **Start/Stop Data Collection Facility**
  - ▶ **Start/Stop Monitoring Sessions**
  - ▶ **Run Reports**

## **SPM/2 2.0 Application Support**

- **Application Programming Interface (API)**
  - ▶ **Query Status of SPM on Network**
  - ▶ **Interface to Realtime Performance Data**

## User-Application Data Collection



## SPM/2.0 Architecture: Performance Hook

- **SPM/2 1.0 Was "Event-Driven"**
  - ▶ Utilized Systrace Hooks
  - ▶ When Event Occured (E.G. "Process Dispatch"), Trace Record Issued
  - ▶ Utilization Computed Using Event & Time-of-Day Records
  - ▶ Heavy Activity Resulted in a Lot of Data

## **SPM/2 2.0 Architecture: Performance Hook**

- **SPM/2 2.0 Uses Architected OS/2 2.0 Counters/Timers**
  - ▶ **Counters/Timers are Control Blocks of Varying Types**
  - ▶ **Utilization Computed Using Various Combinations of Counters/Timers**

## **SPM/2 2.0 Architecture: Performance Hook**

- **SPM/2 2.0 Uses Architected OS/2 2.0 Counters/Timers**
  - ▶ **Amount of Data Determined by:**
    - **How Often Counters/Timers are Read**
    - **Number of Resources Being Collected (Esp. File/Thread Information)**

## **Types of OS/2 2.0 Performance Counter/Timer Control Blocks**

### **■ Event Counters**

- ▶ **Increment by 1 for Each Occurrence of an Event (Such as "Number of Disk Read Operations")**

### **■ Timers**

- ▶ **Count Nano-Second Tics of the System Clock. When Combined with Other Counters, Timers are Used to Measure How Long an Event Took.**

## **Types of OS/2 2.0 Performance Counter/Timer Control Blocks**

### **■ Bulk Counters**

- ▶ **Increment by Quantities (Such as "Number of Bytes Read Since Data Collection Began").**

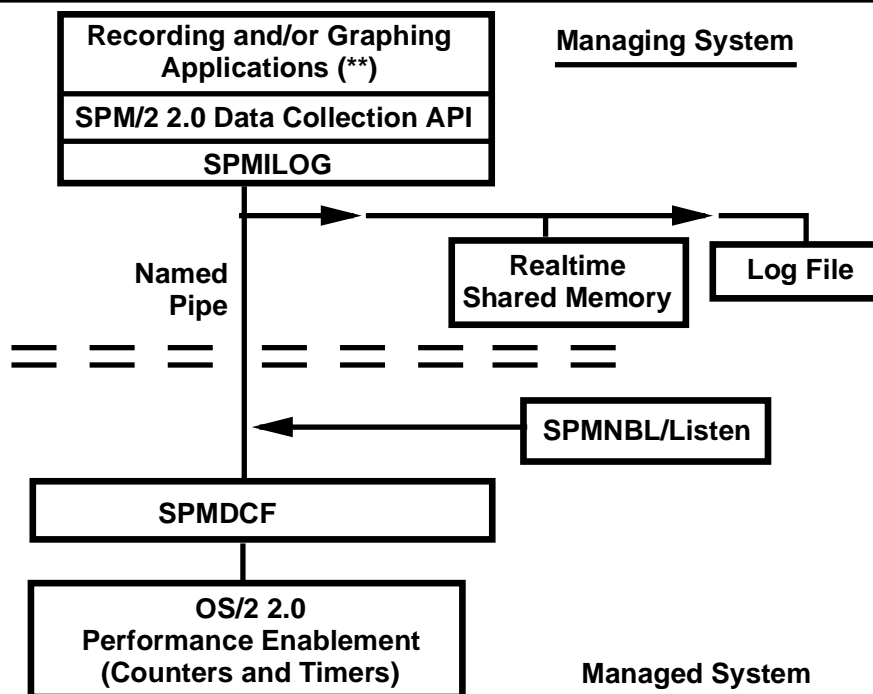
### **■ State Counters**

- ▶ **Indicate the current state of a resource. Their values increase or decrease one at a time (such as the "number of active pages in memory").**

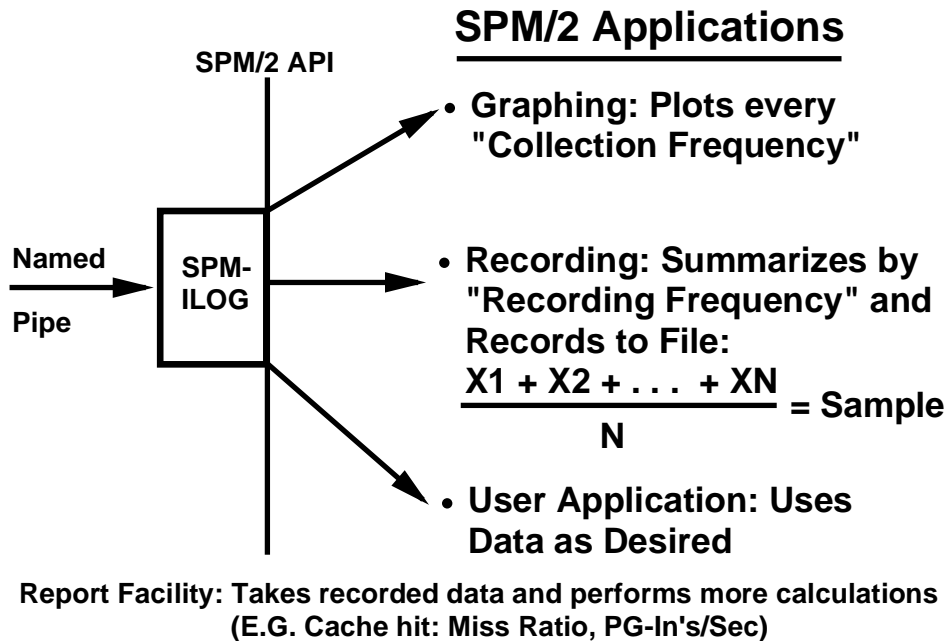
## Types of OS/2 2.0 Performance Counter/Timer Control Blocks

- **Bulk State Counter**
  - A combination of the bulk and state counter concepts.
  
- **Queue Length**
  - These hooks consist of two parts: A Bulk State Counter and a Timer. This Counter/Timer combination is used to compute the "Average Amount of Some Resource X over the Last Y Time."

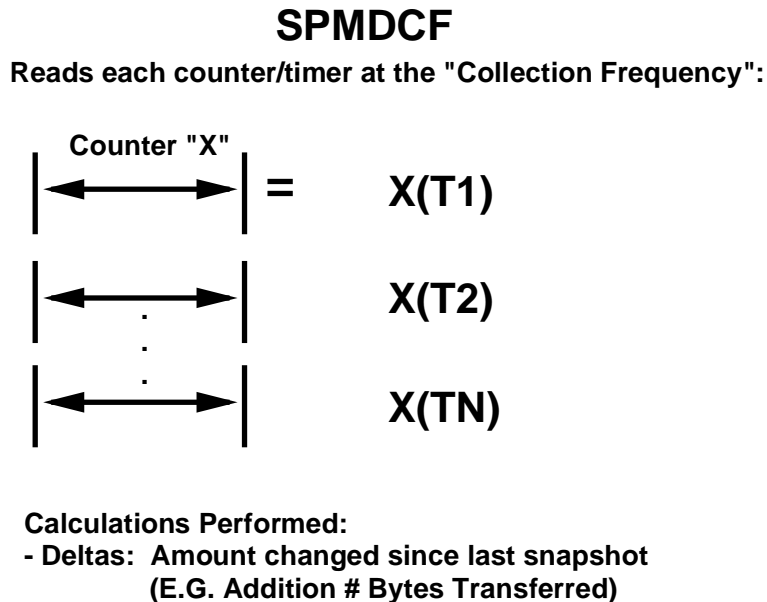
## SPM/2 2.0 Arch.: Component Structure



## SPM/2 2.0 Architecture: Collection & Calculations



## SPM/2 2.0 Architecture: Collection & Calculations





## **Memory Analyzer**

- **Memory/Modules/Resources**
- **View Memory/System Resources**

## **Directory Analyzer: SPMDIR**

- **Same Function as SPM/2 1.0**
- **Additional Fix to Support "Long Subdirectory Names"**
- **Provides**
  - ▶ **Disk Capacity in Terms of Number and Size of Files**
  - ▶ **Information Summarized By:**
    - **Directory**
    - **Subdirectory**
    - **File**
    - **Cluster Length**

## Demonstration

- **Graphing**
- **Reports**
- **Directory Analyzer**
- **Memory Analyzer**

## Installation

- **Diskette**
- **CID Install**

## SPM/2 2.0 Improvements

- **Graphing and Logging Simultaneously**
- **PM-Based Control Panel**
- **Collect User Performance Data**
- **Multiple Concurrent Monitoring Sessions**
- **PM and Hyperbloc Base for Memory Analyzer**

## Packaging

- |                                     |               |                 |
|-------------------------------------|---------------|-----------------|
| ■ <b>Announcement Letter</b>        |               | <b>292-601</b>  |
| ■ <b>Full Product</b>               | <b>495.00</b> | <b>5871-AAA</b> |
| ■ <b>Additional License</b>         | <b>465.00</b> | <b>5872-AAA</b> |
| ■ <b>Upgrade from 1.0</b>           | <b>323.00</b> | <b>5873-AAA</b> |
| ■ <b>Additional License Upgrade</b> | <b>293.00</b> | <b>5874-AAA</b> |
| ■ <b>Distributed Feature</b>        | <b>75.00</b>  | <b>5877-AAA</b> |
| ■ <b>Distributed Upgrade</b>        | <b>20.00</b>  | <b>5878-AAA</b> |