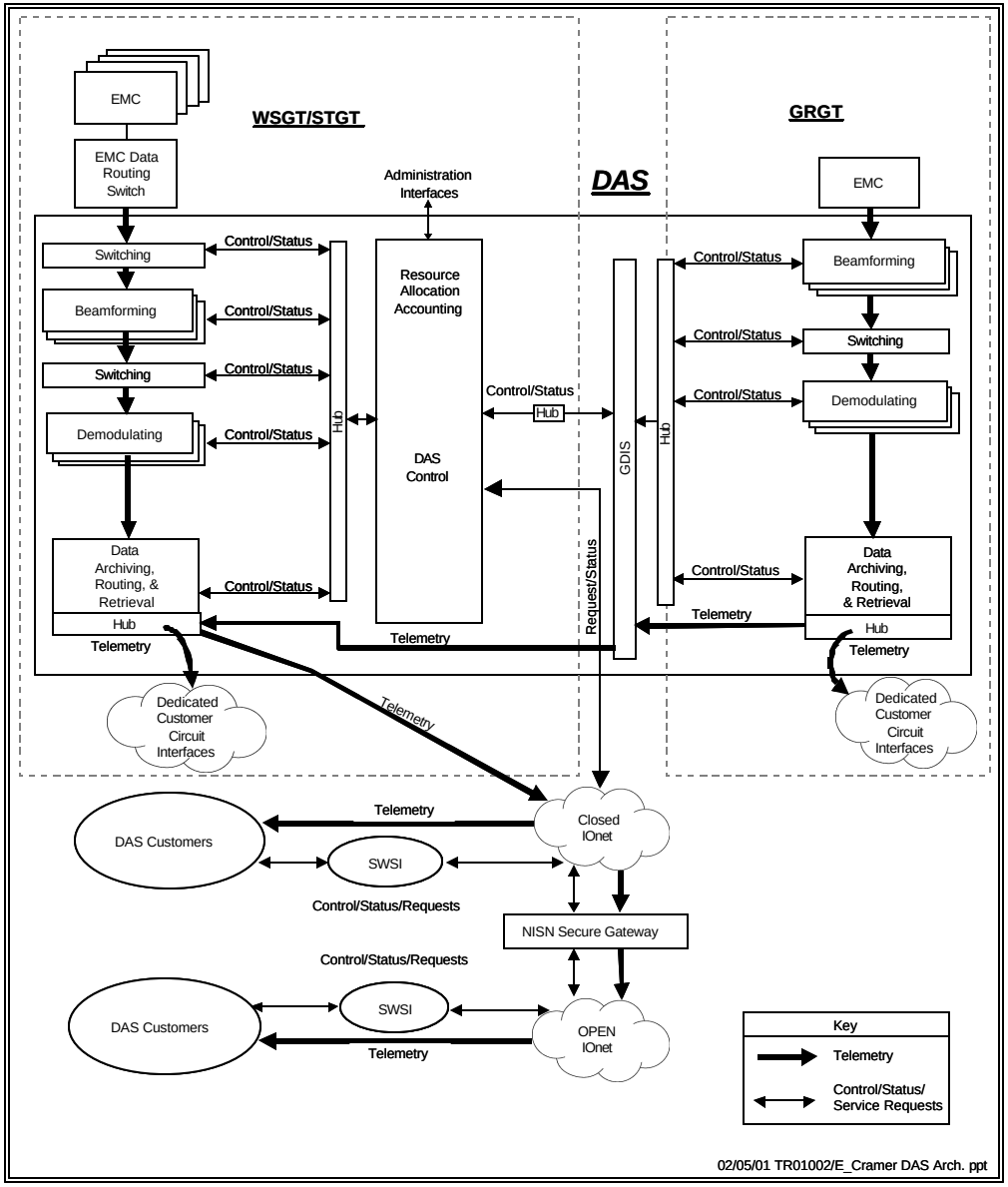
DAS Goals

- The goals of the DAS are to provide:
  - Immediate access to TDRS 1-7 services by the customer
  - Extended duration services
  - Simplified resource scheduling and operation
  - Reduction of service cost
  - DAS capabilities allow new operational methods for:
    - 1) Immediate science alerts.
    - 2) Polling of spacecraft.
    - 3) Autonomous requests for MA service.

DAS Architecture

- The DAS Design Architecture is an addition to the existing TDRSS equipment at WSC and Guam and includes:
  - Two DAS equipment sets added to the White Sands SGLTs (eight receivers shared by the two ground terminals) and one set (8 receivers) at the Guam SGLT. This will provide continuous worldwide DAS service availability for customer platforms.
  - Space Network Web Services Interface (SWSI), a project under separate development at NASA, is the interface between the DAS and customers for scheduling and real-time control and monitoring of the DAS services.

DAS Architecture (Cont'd)



DAS Operations Concept

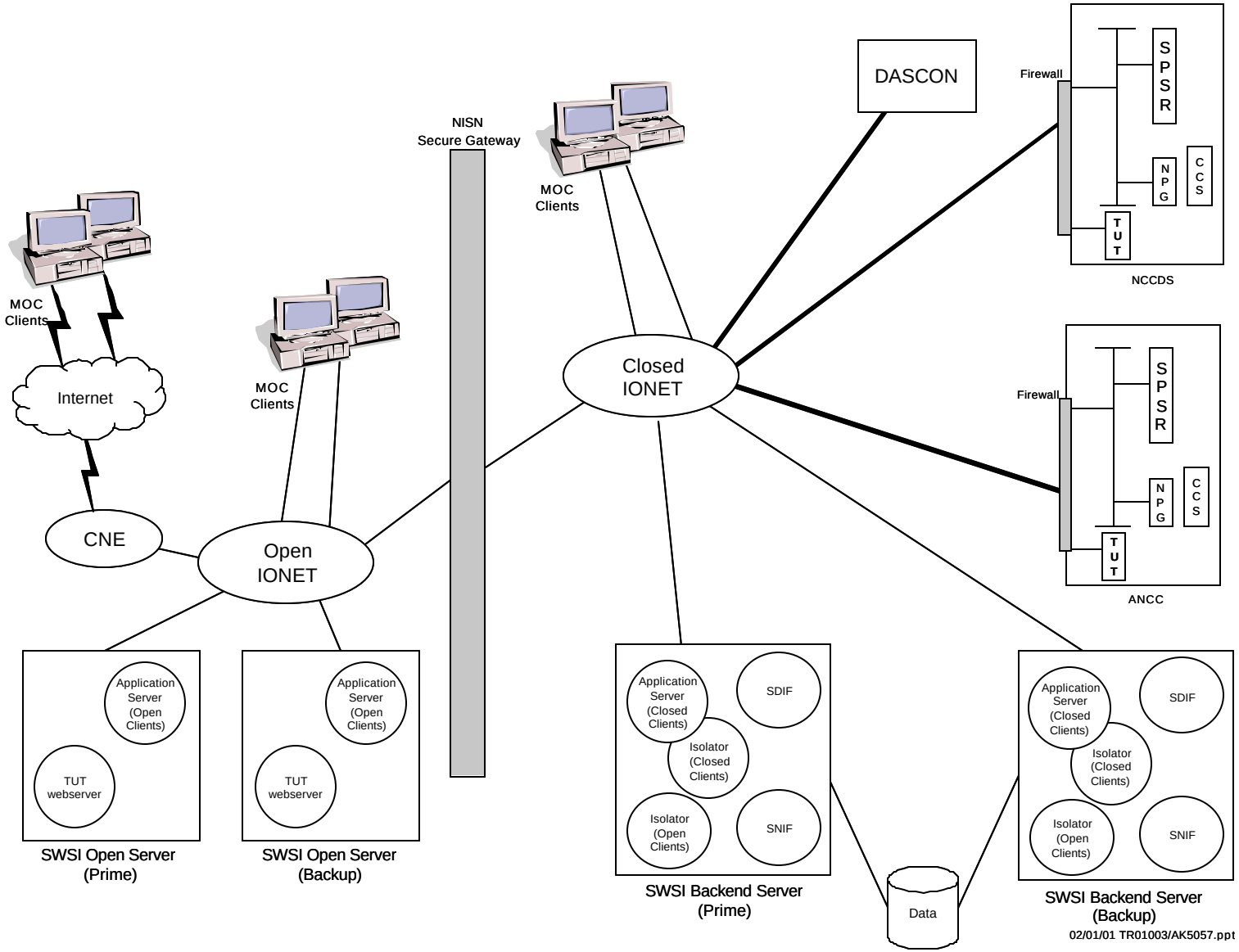
- DAS provides Customers with available time windows for service
  - Dedicated Customers are always guaranteed service. Dedicated customer requests can be allocated to resources that have already been previously allocated to a non-dedicated customer
  - Non-dedicated Customer requests are assigned resources remaining after allocation to dedicated Customers

- Customers access DAS through the Space Network Web Services Interface (SWSI) terminal workstation in their MOC
  - Scheduling Concepts
    - Any TDRS; A single request will automatically generate continuous support coverage including all TDRS-to-TDRS transitions (handovers). i.e., one schedule for 3 years of continuous service
    - Set of TDRS; A single request for each TDRS within a set of TDRS that will provide continual overlapping global coverage. i.e., 3 schedules provides 3 years of continuous service
    - Specific TDRS; request using the conventional event-by-event support request to meet specific operational needs

DAS Operations Concept (cont'd)

- Real Time Control and Monitoring
  - Ground Control Message Requests (GCMRs) for reacquisition and reconfigurations are provided through SWSI
  - User Performance Data is provided for every DAS event scheduled though SWSI

SN Web Services Interface (SWSI)



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