

# Web and Directory Enabled Networks Are they replacing SNMP and TMN?

## IETF/IRTF perspective

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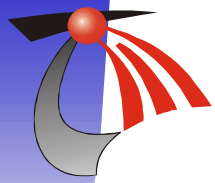
CTIT

University of Twente

the Netherlands

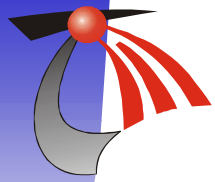
email: [pras@ctit.utwente.nl](mailto:pras@ctit.utwente.nl)

<http://www.ctit.utwente.nl/~pras>



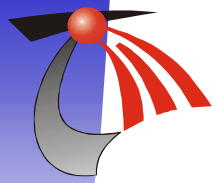
## Status

- **Widely deployed: SNMP & MIBs**
  - **Just ready: SNMPv3**
  - **Current work in IETF: DISMAN**
- **New research in IRTF: NMRG & SMRG**



## Status - DISMAN

- Script MIB
- Schedule MIB
- Event MIB
- Expression MIB
- Notification Log MIB
- Remote Operations MIB



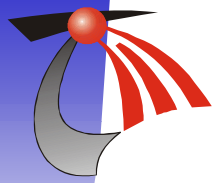
# Future - I

## Element management:

- Web based
- SNMP

## Network management:

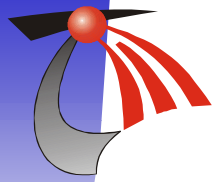
- SNMP
- Dedicated protocols



# Future - II

## Service management

- **Web based (customer interfacing)**
  - **SNMP (between domains)**
  - **XML (between domains)**
    - **Directory based**
  - **Dedicated protocols**



## Some thoughts ...

### The real problem is not:

- how to transfer management information
  - what programming language to use

### But:

- What management information do we have  
(MIB)