RAYTHEON'S HISTORICAL COST DATABASE

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WHY BUILD A HISTORICAL DATABASE?

- IMPROVE ACCURACY OF COSTING FUTURE PROJECTS
- INPUT TO DEVELOPMENT OF RAYCOMO MODEL
- IMPROVED ACCESS OF REUSABLE CODE
Equipment Division
SOFTWARE SYSTEMS LABORATORY

DATABASE APPLICATIONS

- ADD NEW PROJECTS
- UPDATE EXISTING PROJECTS
- INTERACTIVELY QUERY DATABASE
- GENERATE REPORTS
Equipment Division
SOFTWARE
SYSTEMS
LABORATORY

CURRENT STATUS

- Structure defined
- Data entered
- Application developed for adding and updating projects
- Applications developed to query database
  - Systems in database
  - Actual and estimated productivity
  - Cost driver values
- Report generators developed
  - System data selected by characteristics
  - Module data selected by characteristics
  - Subsystem productivity
ADDITIONAL QUERY APPLICATIONS

REPORT GENERATORS

DATABASE CONSISTENCY CHECKER

WICOMO/DATABASE INTERFACE
  • STORE WICOMO ESTIMATES IN DATABASE
  • INPUT TO WICOMO FROM DATABASE

CURRENT DATABASE

CURRENT/HISTORICAL DATABASE INTERFACE
DATABASE TABLES

- CONTRACT DESCRIPTION TABLE - IDENTIFIES CONTRACTS
- SYSTEM CHARACTERISTICS TABLE - OVERVIEW OF SYSTEMS
- SYSTEM SUMMARY TABLE - CATEGORIES OF SYSTEM DATA
- COMPONENT TABLE - DSI/EDSI DATA
- ADAPTED COMPONENT TABLE - MODIFIED CODE INFORMATION
- COST DRIVERS TABLE - COST DRIVER VALUES
- EFFORT TABLE - ACTUAL AND ESTIMATED MAN MONTHS
- SCHEDULE TABLE - ACTUAL AND RECOMMENDED SCHEDULE AND STAFFING
DATA HIERARCHY

CONTRACT

SYSTEM_1

Subsystem_1 ... Subsystem_n

Module_1 ... Module_n

Unit_1 ... Unit_n

... ...

SYSTEM_n

Subsystem_1 ... Subsystem_n

Module_1 ... Module_n

... ...
DATA STORED AT HIERARCHY LEVELS

- **SYSTEM LEVEL**
  - ACTUAL AND RECOMMENDED SCHEDULE AND STAFFING
  - CHARACTERISTICS OF SYSTEM

- **MODULE LEVEL**
  - COST DRIVER VALUES
  - ACTUAL AND ESTIMATED EFFORT
  - DELIVERED SOURCE INSTRUCTION COUNTS

- **UNIT LEVEL**
  - DELIVERED SOURCE INSTRUCTION COUNTS
DATA HIERARCHY ACCESS - TO ENTER/VIEW DATA VIA HIERARCHY

SYSTEMS IN DATABASE - DISPLAYS SYSTEMS AND THEIR ASSOCIATED CONTRACTS

PRODUCTIVITY SUMMARY - CALCULATES AND DISPLAYS ACTUAL AND ESTIMATED PRODUCTIVITY BY SUBSYSTEM

COST DRIVERS - RETRIEVES COST DRIVER VALUES FOR SELECTED COMPONENTS
DATA HIERARCHY ACCESS APPLICATION

- CREATE NEW CONTRACTS AND SYSTEMS
- ENTER DATA
- UPDATE EXISTING DATA
- VIEW DATA VIA HIERARCHY
RIES SYSTEM NAMES AND THEIR ASSOCIATED CONTRACTS

• QUERIES ACROSS DATABASE, BYPASSING THE DATA HIERARCHY

• CAN RETRIEVE A SELECT SUBSET OF SYSTEMS
PRODUCTIVITY SUMMARY APPLICATION

- Sums by subsystem
  - DSI/EDSI values
  - Estimated man months
  - Actual man months
- Calculate and displays productivity
  - Estimated
  - Actual
COST DRIVERS APPLICATION

- RETRIEVES COST DRIVER VALUES
- SELECTED MODULES
- ALL MODULES IN SPECIFIED SUBSYSTEM
SELECT SYSTEMS BY CHARACTERISTICS

SELECT MODULES BY CHARACTERISTICS

CALCULATE PRODUCTIVITY BY SUBSYSTEM