Information to be Stored and a Design of the Run Configuration Database

July 14, 1999
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A. There are three database tables necessary.

1) A "Run Definition" database table that contains for each run the followings:
  a. The list of crate ID's for crates that participated in the given run.
2) A "Crate Definition" database table:
  a. For each crate the sequence of type and mode of the hardware readout by the VBD. This information gives an association between logical readout block in 1)-a. and b. and its location in the raw data block.

3) A supporting database table ("Card Specification") that holds the information concerning:
  a. Types of hardware read out by VBD's (VME Buffer Drive) whose values could be: MRCs, VRBs, ADCs, Cal Controllers, VRBCs, 68ks, Lum Monitoring cards, Trigger cards, L2 alpha memories, etc == *Must be well-defined logical memory blocks that VBD's can go and fetch.*
  b. Modes of operation permitted for the types of hardware listed in a). For example: ADC data vs. calibration mode, the operational mode needs to be known to the download control device as well as an unpacker.

B. Description of the schema:

I. Supporting database tables

Table 1 "Card Description" table

ID => NUMBER
CARD_TYPE => VARCAR2
RUN_MODE => VARCAR2
MAX_CHANNEL => NUMBER

MAX_LENGTH => NUMBER

Table 2 “Crate Description” table

ID => NUMBER
DET_TYPE => VARCAR2
DESC => VARCAR2

Table 3 “Run Description” table

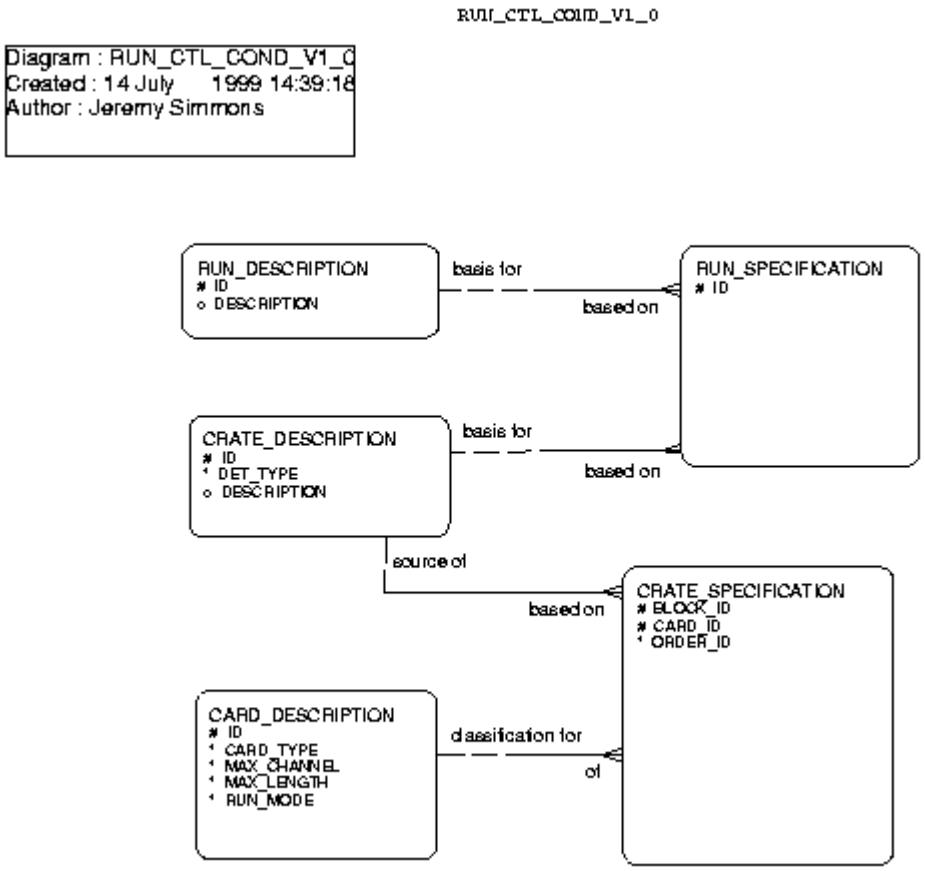
ID => NUMBER
DESC => VARCAR2

II. Primary database tables

Table 1 “Run Specification” table

CRATE_DESC_ID => NUMBER FK
RUN_DESC_ID => NUMBER FK

Table 2 “Crate Specification” table

CARD_ID => NUMBER
BLOCK_ID => NUMBER
CRATE_DESC_ID => NUMBER FK
CARD_DESC_ID => NUMBER FK
ORDER_ID => NUMBER

C. Entity Relationship Diagram of the Database