

Flat File Definition for Data Dictionary Element (DDE)

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\\ A group of one or more data dictionary elements is preceded by data
dictionary element metadata common to all
DDE_Start
DDE_Type
\\ Start of data dictionary element
\\ {required} Types include
    Verb(by type?):
        Characteristic,
        Entity,
        Network,
        Agent
        Person,
        Organization,
        Equipment,
        Aircraft(?),
        Emitter(?)
    Information
        Perception,
        Order,
        Plan,
        Query,
        Response,
        Estimate,
        Ground Truth,
        Material,
        Facility,
        Feature
ID: DDE_Identifier
\\ {optional} Unique identifier of data dictionary element with Data Dictionary
(Action, Characteristic, Entity, Verb) Rules are TBD. If not supplied in DIF,
Integration process will supply.
DD: DDE_Definition_Date
\\ {required}Effective date of DDE definition within CMMS.
NM: DDE_Name
\\ {required}Name of DDE
DF: DDE_Definition
\\ {required}Definitive description of DDE
DA: DDE_Definition_Authority
\\ {required} Sponsoring authority for definition
RF: DDE_Reference
\\ {optional multiple} Identifier for ADS reference
KD: DDE_Kind_of
\\ {optional if Entity, Characteristic, or Verb} Identifier of taxonomical parent
for Entities, Characteristics, and Verbs
SN: DDE_Synonym_of
\\ {optional if Characteristic, Characteristic, or Verb } Delimiter
Identifier of synonym of Entities, Characteristics, and Verbs
SB: DDE_Subject_of
\\ {required if Action} Identifier of Action subject
VB: DDE_Verb_of
\\ {required if Action} Identifier of Action verb
DO: DDE_Direct_object_of
\\ {required if Action} Identifier of Action direct object
OM: DDE_Modifier_of
\\ {optional multiple, if Action} Modifier (e.g., preposition) of Action indirect
object
IO: DDE_Indirect_object_of
\\ {required, if OM: delimiter } Identifier of Action indirect object
CH: DDE_Characteristic_of
\\ {required multiple, if Entity} Identifier of Characteristic of instant Entity.
CP: DDE_Component_of
\\ {optional multiple, if Entity} Identifier of Entity of which instant Entity is a
component
DDE_End
\\ End of data dictionary element

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Notes:

Definition Dates not required for Kind_of, Synonym_of, Subject_of, Characteristic_of because business rule is different from the nominal data model, i.e., the definition referenced is time-dependent.

Delimiters for optional fields are required so that parser counts delimiter to determine which column contents of field are applicable to. Conversely, multiple optional fields (0 or more instances require a locally unique delimiter to indicate presence or absence.

With regard to characteristics of entities, an assumption is made that an entity will have at least one characteristic

BNF for Data Dictionary Element (DDE):

```
DDE ::= DDE_START All_DDE { Action|Characteristic|Entity|Verb } DDE_END
All_DDE ::= DDE_Type { $\emptyset$  | ID: DDE_Identifier} DD: DDE_Definition_Date NM: DDE_Name DF:
          DDE_Definition DA: DDE_Definition_Authority Reference
Reference ::=  $\emptyset$  | Reference REF: DDE_Reference
Action ::= SB: DDE_Subject_of VB: DDE_Verb_of DO: DDE_Direct_object_of Indirect
Indirect ::=  $\emptyset$  | Indirect OM: DDE_Modifier_of IO: DDE_Indirect_object_of
Characteristic, Verb ::= Atomic
Atomic ::=  $\emptyset$  | DDE_Kind_of ::  $\emptyset$  | DDE_Synonym_of :::
Entity ::= Atomic Ent
Ent ::= Chr Cmp
Chr ::= CH: DDE_Characteristic_of | Chr CH: DDE_Characteristic_of
Cmp ::=  $\emptyset$  | Cmp CP: DDE_Component_of
DDE_Kind_of, DDE_Synonym_of, DDE_Characteristic_of, DDE_Component_of ::= DDE_Identifier
          DDE_Identifier, DDE_Definition_Date, DDE_Name, DDE_Definition, DDE_Definition_Authority,
          DDE_Reference ::= text
DDE_Type ::= {Verb | Characteristic | Entity | Network | Agent | Person | Organization | Equipment |
             Information | Perception | Order | Plan | Query | Response | Estimate | Ground Truth | Material |
             Facility | Feature}
text ::= text {a..z|A..Z|0..9|!?, , etc.} | {a..z|A..Z|0..9|!?, etc.}
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