HRE – GENERIC OBJECT TYPES - OVERVIEW

Revision history

2018-06-02	Robin Lamacraft	Original draft
2018-06-05	Robin Lamacraft	Added new tables in Occasions
2019-02-12	Robin Lamacraft	Rename Contains to Entities, add Geologicals and add ability to have Individuals and Groups of Generic Object types. Add Evidence as a similar object type with restrictions on its use.

SCOPE

All user research data within HRE is stored in database tables that are associated with one of the 7 generic data types (or links between them). The 7 generic data types are divided into sub-types. The 7 generic object types are classified on their distinguishing data properties or their behaviour within the HRE data model. Much of the code within HRE can be shared for common aspects that these generic data types have. The classification of these generic research data types is:

1. **BIOLOGICALS** – example sub-types - *Persons, Animals, Plants, etc*
   Biological object types always represent non-divisible objects that can reproduce

2. **PHYSICALS** – example sub-types - *Art Works, Furniture, Grave Stones, etc*
   Physical object types always represent non-divisible object that cannot reproduce and have a physical form

3. **GEOGRAPHICALS** – example sub-types – *Locations, Archaeological sites, Astronomy etc*
   Spatial object

4. **DIGITALS** – example sub-types - *Images, Videos, Audio, DNA tests, XML, etc*
   Digital object types always represent non-divisible objects that cannot reproduce and have a digital form

5. **ENTITIES** – example sub-types – *Companies, Parks, Places, Clubs, etc*
   Contain objects represent objects that can split and merge and which can be members of hierarchies

6. **OCCASIONS** – example sub-types - *Events and Tasks*
   Occasions objects represent data about an action in time to which other research data objects can be linked. Events are in historical time space, while Tasks are in the researcher's time space (now). They may also form hierarchies

7. **EVIDENCE** – example sub-types – *Sources, Repositories, etc*
   Contain objects represent objects which can be members of hierarchies
   Details to be added later.

BIOLOGICALS

The database tables for Biological types are:

- **401 BIOS** – One record per Biological Object (Includes flag values)
- **403 BIO_NOTEPADS** – One record per Notepad value
- **404 BIO_NAMES –** One record per Name with Name Event Tag
- **405 BIO_NAME_PARTS** – creates a dictionary of common biological sub-type element values of a BIO name

- **407 SEX_DEFNS –** Fixed table with sex states as a lookup
- **408 LIVING_DEFNS –** Fixed table with living status as a lookup
- **409 BIO_PARENT_SETS** – Deals with biological and non biological parenting
- **410 BIO_KIN_TERM_DEFNS** – One record per kin term definition
- **411 BIO_ETHNICITY_DEFNS** – One record per ethnicity definition
- **412 BIO KIN_TERM_TRANS** – One record per kin term translation.

PHYSICALS

The database tables for Physicals are:

- **651 PHYSICALS** – One record per Physical Object (includes flag values)
- **652 PHYSICAL_NAMES** – One record per Name with Name Event Tag
- **653 PHYSICAL_NAME_PARTS** – creates a dictionary by physical sub-type of common element values of a PHYSICAL name
- **656 PHYSICAL_NOTEPADS** – One record per Notepad value.

GEOGRAPHICALS

The database tables for Geographicals are:

- **551 GEOGS** – One record per Geographical Object (includes flag values)
- **552 GEOG_NAMES** – One record per Name with Name Event Tag
- **553 GEOG_NAME_PARTS** – creates a dictionary by physical sub-type of common element values of a GEOGRAPHICAL name
- **554 GEOG_NOTEPADS** – One record per Notepad value.

DIGITALS

The database tables for Digitals are:

- **676 DIGITALS** – One record per Digital Object (includes flag values)
- **677 DIGITAL_NAMES** – One record per Name with Name Event Tag
- **678 DIGITAL_NAME_PARTS** – creates a dictionary by digital sub-type of common element values of a DIGITAL name
- **680 DIGITAL_NOTEPADS** – One record per Notepad value

ENTITIES

The database tables for Entities are:

- **701 ENTITIES** – One record per Contain Object (includes flag values)
- **702 ENTITY_NAMES** – One record per Name with Name Event Tag
- **703 ENTITY_NAME_PARTS** – creates a dictionary by contain sub-type of common element values of a CONTAIN name
- **706 ENTITY_NOTEPADS** – One record per Notepad value.

OCCASIONS

The database tables for Occasions are:

- **501 OCCASN_TAG_DEFNS** – One record per Occasion Tag definition
- **502 OCCASNS** – One record per Occasion Object (includes flag values)
- **503 OCCASN_ASSOC_TAG_DEFNS** – One record per Occasion Associate Tag definition
- **504 OCCASN_ASSOCS** – One record per Occasion Associate Link
- **505 OCCASN_BTWN_ASSOC_TAG_DEFNS** – One record per Occasion Between Associate Tag definition
- **506 OCCASN_BTWN_ASSOCS** – One record per Occasion Between Associates link
- **507 OCCASN_TIMELINE_DEFNS** – One record per Occasion Timeline definition

- **508 OCCASN_TIMELINE_ELMNTS –** One record per date point in a timeline
- **510 OCCASN_NOTEPADS** – One record per Notepad value
- **511 OCCASN_OCCASN_TAG_DEFNS** – One record per Occasion Tag definition
- **512 OCCASN_OCCASNS** – One record per Occasion to Occasion link
- **513 OCCASN_NAMES** – One record per Name with Occasion Name Tag
- **514 OCCASN_NAME_PARTS** – creates a list of sub-type of common element values of an OCCASN name
- **516 OCCASN_ASSOC_NAME_TAG_DEFNS** – One record per Occasion Associate Name Tag definition
- **517 OCCASN_ASSOC_NAMES** – One record per Occasion Associate Name
- **518 OCCASN_ASSOC_TRANSFERS** – One record per Occasion Name Tag definition
- **519 OCCASN_NAME_TAG_DEFNS** – One record per Occasion Associate Name Tag definition
- **520 OCCASN_ASSOC_TAG_DEFNS** – One record per Occasion Associate definition
- **521 OCCASN_ASSOC_PAIR_TAG_DEFNS** – One record per Occasion Associate Pair Tag definition
- **522 OCCASN_TAG_DEFNS** – One record per Occasion Tag definition

EVIDENCE

To be added later – relates to Sources, Citations, Repositories and inter-connection to the other base types.

GENERIC OBJECT TYPES and SUB-TYPES

All data of sub-types of these generic object types are stored in these tables.

Database table **169 ENTITY_SUB_TYPE_DEFNS** holds a type and sub-type dictionary over all generic object types. Each record stores a generic type and a sub-type value which is related to a Label entry in table **204 LABEL_TRANS**. Hence more sub-types can be added to HRE without major modifications of the database schema. These are likely to be created by plugins.

INDIVIDUAL and GROUP GENERIC OBJECT TYPES

All of the above the database records for generic object types have a BOOLEAN field IS_GROUP, which when FALSE means the record represents an individual of this type, whereas if the field is TRUE then the record represents a group of members of this type. They can be a mixture of individuals and of groups. These groups are homogeneous to the same sub-type of the base type. NOTE: Only the Entity base type can create Entity Groups of mixed types.