# Groups:

Please note I’m using the term “group” for convenience. This term has caused issues in the past so we will want to use it with care or replace it with another term. Collection has been suggested as a term.

Abstract group mechanism

* Contain the properties providing a type and role (both CVtypes)
* This appears to be a conceptually based managed object and would therefore get the set of properties (Locator~~, Designation, Definition~~) Description
* Are there times when there are groups that you need to manage that do not have an associated concept?
  + Data set (collection of variables and data) – not generally related to a single concept

A group of objects of the same type

* Subtype A: specific class of a single type (i.e. Concept)
* Subtype B: an abstract set of classes serving the same role (i.e. Abstract=Agent, Classes=Organization, Individual, Machine)
* A group of groups
  + Subtype A: contains a single class of the abstract type “group” (i.e. A group of variable groups)
  + Subtype B: contains a heterogeneous set of classes of the abstract type “group” (i.e. Groups of classes related to a subject specification – Variables, Concepts, Questions, etc.)

Simple “bag” versus one or more of the following dimensions:

* Flat vs. Hierarchical
* Unordered vs. Ordered/Sequential
* Concept based vs. Not concept based

|  |  |  |
| --- | --- | --- |
|  | Unordered | Ordered / Sequential |
| Flat | BAG | B |
| Hierarchical | A | AB |

Where Flat/Unordered is a basic “bag” and there are 3 extension types with one using plug-in A only, one using plug-in B only, and one using both plug-ins.

Structure issues:

* Base is a simple “bag” (all properties of the “bag” should be inheritable)
  + Does this imply that a “bag” defines its own contents?
* A single string of extensions, each more complex
  + BAG🡪 Ordered Bag 🡪 Hierarchical Ordered Bag🡪 etc.
* Or a sets of properties one can “plug in” to an extended “bag” creating specialized types
  + A BAG as an extension base with specific feature plug-ins that could be used as needed in creating a “group” for a specific purpose
  + A BAG plus a set of specialized types (each may use a combination of plug-in) which themselves become extension bases for instantiated groups
    - Example: Concept Group with extension base=ordered hierarchical group

Imposing order within a group:

* Order is a property of the role of the contained object within the group not of the object itself
  + Order is assigned at the point of the relationship (the act of including an object within the group)
  + Order identification needs to be alterable
    - Cannot assign a 1,2,3,etc.
    - Use of a means of identifying a proceeding and following object allows for insertion with minimal changes to existing content

A structure may already exist in a programming language which we can borrow (SmallTalk*) [see SmallTalk\_Squeak\_Collection.xslx]*

Struct (structure) combine heterogeneous data type *[see collection classes 20140723.pptx]*

Standard on general purpose data types ISO 11404 <http://standards.iso.org/ittf/PubliclyAvailableStandards/c039479_ISO_IEC_11404_2007(E).zip>

Purposes of grouping facility:

* Scheme – purely technical purpose to manage a set of like objects
* Group identical objects for another purpose related to a concept, universe, subject term, keyword, administrative usage, etc.
* Resource package to manage study independent material or heterogeneous types – could be understood as group of groups
* “Group” of studies specifically – inheritance features – conceptually good but technically was a problem – needs to be further explored as it is not well defined
* Local Holdings Package – aligned one publication type with duplicate structure for adding local information and linking it to the original information – is there overlap with this and previous structure in terms of inheritance
* Modules – do these go out the door? These were a mix of different group types which are now functional views or library packages but are no longer related to an abstract group mechanism
* Means of associating objects with an externally assigned set of subjects – a group of variables associated with an ICPSR subject heading; a group of data sets associated with a specific shape file
* Administrative assignment of a group of objects to an individual or group for review or development purposes
* A means of subdividing a large number of objects to support ease of re-use by reference
* Data Dictionary (collection of variables related to data set)
* Code sets
* Supporting reuse of standard subsets of objects (i.e. European countries within a broader set of all countries)