Pete Jemian's example 2
Nov. 15 version
(No "Z" - file version)

```
HDF5 "example2.hdf5" {
GROUP "/" {
   ATTRIBUTE "NX_class" {
      DATATYPE  H5T_STRING {
            STRSIZE 6;
            STRPAD H5T_STR_NULLPAD;
            CSET H5T_CSET_ASCII;
            CTYPE H5T_C_S1;
         }
      DATASPACE  SCALAR
   }
   ATTRIBUTE "creator" {
      DATATYPE  H5T_STRING {
            STRSIZE 23;
            STRPAD H5T_STR_NULLPAD;
            CSET H5T_CSET_ASCII;
            CTYPE H5T_C_S1;
         }
      DATASPACE  SCALAR
   }
   ATTRIBUTE "file_name" {
      DATATYPE  H5T_STRING {
            STRSIZE 13;
            STRPAD H5T_STR_NULLPAD;
            CSET H5T_CSET_ASCII;
            CTYPE H5T_C_S1;
         }
      DATASPACE  SCALAR
   }
   ATTRIBUTE "file_time" {
      DATATYPE  H5T_STRING {
            STRSIZE 26;
            STRPAD H5T_STR_NULLPAD;
            CSET H5T_CSET_ASCII;
            CTYPE H5T_C_S1;
         }
      DATASPACE  SCALAR
   }
   ATTRIBUTE "title" {
      DATATYPE  H5T_STRING {
            STRSIZE 33;
            STRPAD H5T_STR_NULLPAD;
            CSET H5T_CSET_ASCII;
            CTYPE H5T_C_S1;
```

Can be obtained from host file system on (at least for the original file)

2

```
      }
   DATASPACE  SCALAR
}
GROUP "entry" {
   ATTRIBUTE "NX_class" {
      DATATYPE  H5T_STRING {
            STRSIZE 7;
            STRPAD H5T_STR_NULLPAD;
            CSET H5T_CSET_ASCII;
            CTYPE H5T_C_S1;
         }
      DATASPACE  SCALAR
   }
   GROUP "data" {
      ATTRIBUTE "NX_class" {
         DATATYPE  H5T_STRING {
               STRSIZE 6;
               STRPAD H5T_STR_NULLPAD;
               CSET H5T_CSET_ASCII;
               CTYPE H5T_C_S1;
            }
         DATASPACE  SCALAR
      }
      DATASET "columns" {
         DATATYPE  H5T_STD_I64LE
         DATASPACE  SIMPLE { ( 320 ) / ( 320 ) }
         ATTRIBUTE "long_name" {
            DATATYPE  H5T_STRING {
                  STRSIZE 6;
                  STRPAD H5T_STR_NULLPAD;
                  CSET H5T_CSET_ASCII;
                  CTYPE H5T_C_S1;
               }
            DATASPACE  SCALAR
         }
         ATTRIBUTE "units" {
            DATATYPE  H5T_STRING {
                  STRSIZE 4;
                  STRPAD H5T_STR_NULLPAD;
                  CSET H5T_CSET_ASCII;
                  CTYPE H5T_C_S1;
               }
            DATASPACE  SCALAR
         }
      }
```

Nexus overhead for multiple experiments in a single file

value is NX Entry

value is NX Data

Parsers look for this

Pete chose the name - not Nexus - could be X reference to a positioner

like X or first axis

3

```
DATASET "data" {
   DATATYPE  H5T_STD_I64LE
   DATASPACE  SIMPLE { ( 320, 240 ) / ( 320, 240 ) }
   ATTRIBUTE "axes" {
      DATATYPE  H5T_STRING {
            STRSIZE 12;
            STRPAD H5T_STR_NULLPAD;
            CSET H5T_CSET_ASCII;
            CTYPE H5T_C_S1;
         }
      DATASPACE  SCALAR
   }
   ATTRIBUTE "doc" {
      DATATYPE  H5T_STRING {
            STRSIZE 22;
            STRPAD H5T_STR_NULLPAD;
            CSET H5T_CSET_ASCII;
            CTYPE H5T_C_S1;
         }
      DATASPACE  SCALAR
   }
   ATTRIBUTE "image_type" {
      DATATYPE  H5T_STRING {
            STRSIZE 5;
            STRPAD H5T_STR_NULLPAD;
            CSET H5T_CSET_ASCII;
            CTYPE H5T_C_S1;
         }
      DATASPACE  SCALAR
   }
   ATTRIBUTE "long_name" {
      DATATYPE  H5T_STRING {
            STRSIZE 22;
            STRPAD H5T_STR_NULLPAD;
            CSET H5T_CSET_ASCII;
            CTYPE H5T_C_S1;
         }
      DATASPACE  SCALAR
   }
   ATTRIBUTE "signal" {
      DATATYPE  H5T_STRING {
            STRSIZE 1;
            STRPAD H5T_STR_NULLPAD;
            CSET H5T_CSET_ASCII;
            CTYPE H5T_C_S1;
```

X

The image

Free form text — require

redundant ?

data

intrinsic to Nexus and required by them

Enumeration (table is on web) optional

```
            }
         DATASPACE  SCALAR
      }
      ATTRIBUTE "target" {
         DATATYPE  H5T_STRING {
               STRSIZE 16;
               STRPAD H5T_STR_NULLPAD;
               CSET H5T_CSET_ASCII;
               CTYPE H5T_C_S1;
            }
         DATASPACE  SCALAR
      }
      ATTRIBUTE "units" {
         DATATYPE  H5T_STRING {
               STRSIZE 6;
               STRPAD H5T_STR_NULLPAD;
               CSET H5T_CSET_ASCII;
               CTYPE H5T_C_S1;
            }
         DATASPACE  SCALAR
      }
   }
   DATASET "rows" {
      DATATYPE  H5T_STD_I64LE
      DATASPACE  SIMPLE { ( 240 ) / ( 240 ) }
      ATTRIBUTE "long_name" {
         DATATYPE  H5T_STRING {
               STRSIZE 6;
               STRPAD H5T_STR_NULLPAD;
               CSET H5T_CSET_ASCII;
               CTYPE H5T_C_S1;
            }
         DATASPACE  SCALAR
      }
      ATTRIBUTE "units" {
         DATATYPE  H5T_STRING {
               STRSIZE 4;
               STRPAD H5T_STR_NULLPAD;
               CSET H5T_CSET_ASCII;
               CTYPE H5T_C_S1;
            }
         DATASPACE  SCALAR
      }
   }
}
```

Pete chose the name - not Nexis - could be Y

like Y or second axis (and this is a 2D array)

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Data

```
GROUP "image_exchange" {
   ATTRIBUTE "NX_class" {
      DATATYPE  H5T_STRING {
            STRSIZE 16;
            STRPAD H5T_STR_NULLPAD;
            CSET H5T_CSET_ASCII;
            CTYPE H5T_C_S1;
         }
      DATASPACE  SCALAR
   }
   GROUP "about_this" {
      ATTRIBUTE "NX_class" {
         DATATYPE  H5T_STRING {
               STRSIZE 6;
               STRPAD H5T_STR_NULLPAD;
               CSET H5T_CSET_ASCII;
               CTYPE H5T_C_S1;
            }
         DATASPACE  SCALAR
      }
      DATASET "author" {
         DATATYPE  H5T_STRING {
               STRSIZE 24;
               STRPAD H5T_STR_NULLPAD;
               CSET H5T_CSET_ASCII;
               CTYPE H5T_C_S1;
            }
         DATASPACE  SIMPLE { ( 1 ) / ( 1 ) }
      }
      DATASET "date" {
         DATATYPE  H5T_STRING {
               STRSIZE 27;
               STRPAD H5T_STR_NULLPAD;
               CSET H5T_CSET_ASCII;
               CTYPE H5T_C_S1;
            }
         DATASPACE  SIMPLE { ( 1 ) / ( 1 ) }
      }
      DATASET "description" {
         DATATYPE  H5T_STRING {
               STRSIZE 122;
               STRPAD H5T_STR_NULLPAD;
               CSET H5T_CSET_ASCII;
               CTYPE H5T_C_S1;
            }
```

```
            DATASPACE  SIMPLE { ( 1 ) / ( 1 ) }
         }
         DATASET "file_name" {
            DATATYPE  H5T_STRING {
                  STRSIZE 14;
                  STRPAD H5T_STR_NULLPAD;
                  CSET H5T_CSET_ASCII;
                  CTYPE H5T_C_S1;
               }
            DATASPACE  SIMPLE { ( 1 ) / ( 1 ) }
         }
      }
      DATASET "columns" {
         HARDLINK "/entry/data/columns"
      }
      DATASET "image" {
         HARDLINK "/entry/data/data"
      }
      DATASET "rows" {
         HARDLINK "/entry/data/rows"
      }
   }
}
}
}
```

X

pointer to data

Francesco's simple example

```
HDF5 "TomographyDataSet.h5" {
GROUP "/" {
   GROUP "data_exchange" {
      DATASET "complex_index" {
         DATATYPE  H5T_STD_I32LE
         DATASPACE  SIMPLE { ( 1 ) / ( 1 ) }
         DATA {
         (0): -1
         }
      }
      DATASET "data" {
         DATATYPE  H5T_STD_I32LE
         DATASPACE  SIMPLE { ( 12 ) / ( 12 ) }
         DATA {
         (0): 1, 2, 3, 4, 5, 6, 1, 2, 3, 4, 5, 6
         }
      }
      DATASET "data_dimensions" {
         DATATYPE  H5T_STD_I32LE
         DATASPACE  SIMPLE { ( 3 ) / ( 3 ) }
         DATA {
         (0): 2, 3, 2
         }
      }
      DATASET "data_exchange_version" {
         DATATYPE  H5T_STRING {
               STRSIZE 6;
               STRPAD H5T_STR_NULLTERM;
               CSET H5T_CSET_ASCII;
               CTYPE H5T_C_S1;
            }
         DATASPACE  SCALAR
         DATA {
         (0): "1.0.1"
         }
      }
      DATASET "image_type" {
         DATATYPE  H5T_STRING {
               STRSIZE 13;
               STRPAD H5T_STR_NULLTERM;
               CSET H5T_CSET_ASCII;
               CTYPE H5T_C_S1;
            }
         DATASPACE  SCALAR
```

Y

X

Z

data

```
            DATA {
            (0): "transmission"
            }
         }
         DATASET "n_dimensions" {
            DATATYPE  H5T_STD_I32LE
            DATASPACE  SIMPLE { ( 1 ) / ( 1 ) }
            DATA {
            (0): 3
            }
         }
      }
   }
}
```