

IP3 / WC2N Archives & Information Systems

Michael Allchin

IP3 / WC2N Data & Information Manager



3 Steps:

- **Design database**



3 Steps:

- **Design database**
- **Fill with data**



3 Steps:

- **Design database**
- **Fill with data**
- **Implement search /
query / retrieval tools**



Off-The-Shelf Solution?

CUAHSI

**Consortium of Universities for the
Advancement of Hydrologic Science, Inc**



Off-The-Shelf Solution?

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HIS

Hydrologic Information System



Off-The-Shelf Solution?

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HIS

Hydrologic Information System

ODM

Object Data Model



Data Model

- **Generic design**



Data Model

- **Generic design:**
- **Features**
(entities which 'own' attributes)



Data Model

- **Generic design:**
- **Features**
(entities which 'own' attributes)
- **Attributes**
 - **sub-features**
 - **series**
 - **properties**



Populate

- **Organise**



Populate

- **Organise**
- **Validate**



Populate

- **Organise**
- **Validate**
- **Structure**



Populate

- **Organise**
- **Validate**
- **Structure**
- **Despatch**



```
daily076x59climate - Notepad
File Edit Format View Help
# Contents: Daily interval climate, station 076x59,
# Reynolds Creek Experimental watershed.
# Version: 1.00, written on 07NOV01.
# Location: 520367E 4783418N (UTM, zone 11).
# Elevation: 1207 (m GPS) 1202 (m DEM).
# Time format: Mountain Standard Time (Greenwich +7).
# Period: 1January1964-1October1996.
# Data columns: 1-2 Month, 4-5 Day, 7-10 Year,
# 12-16 Minimum air temperature (°C),
# 17-22 Maximum air temperature (°C),
# 24-25 Class A pan evaporation (mm).
# Missing data: represented by '.'
# Contact: publicdatabase@nwrc.ars.usda.gov
# Citation: Hanson, C. L., D. Marks, and S. S. Van Vactor, Long-term climate dat
# Reynolds Creek Experimental watershed, Idaho, USA, Water Resources R
# 37, 2839-2841, 2001.
# Conditions: Use of this data implies acceptance of the conditions set forth in t
# electronic files ftp.nwrc.ars.usda.gov/databases/license.txt and
# ftp.nwrc.ars.usda.gov/databases/disclaimer.txt governing conditions
# of fair use and limits of liability, respectively.
#-----
01 01 1964 -6.7 10.0 .
01 02 1964 -6.1 3.3 .
01 03 1964 -7.8 3.3 .
01 04 1964 -9.4 1.1 .
01 05 1964 -7.8 3.3 .
01 06 1964 -1.1 3.3 .
01 07 1964 -8.9 -0.6 .
01 08 1964 -10.6 0.0 .
01 09 1964 -10.6 3.9 .
01 10 1964 -10.0 -2.2 .
01 11 1964 -13.9 1.1 .
01 12 1964 -16.7 -1.7 .
01 13 1964 -18.3 -3.3 .
01 14 1964 -11.7 -4.4 .
```



```
daily 1 feature 3 month - Notepad
File Edit Format View Help
!Station
Station!Name|Station 076x59||Text
Station!SubFeature|DailyData
DailyData!Name|Daily interval climate, version 1.00, written 7-Nov-2001||Text
DailyData!Contact|publicdatabase@nwr.c.ars.usda.gov||Text
DailyData!Citation|Hanson, C. L., D. Marks, and S. S. Van Vector, Long-term climate
DailyData!Conditions|Use of this data implies acceptance of the conditions set forth
DailyData!SubFeature|Period
Period!Start|1-Aug-1981||Date
Period!Finish|31-Oct-1981||Date
DailyData!Series
Series!MissingData|.
Series!ColumnDelimiter|" "
Fields!DateTime/Month
Fields!DateTime/Day
Fields!DateTime/Year
Fields!MinAirTemp|Minimum air temperature|°C|Real
Fields!MaxAirTemp|Maximum air temperature|°C|Real
Fields!ClassAEvap|Class A pan evaporation|mm|Real
Data!Start
08 01 1981 11.4 30.6 8
08 02 1981 13.3 28.3 9
08 03 1981 11.1 27.7 9
08 04 1981 11.1 28.4 9
08 05 1981 11.7 31.0 10
08 06 1981 12.5 32.7 10
08 07 1981 15.6 34.8 11
08 08 1981 16.2 33.8 11
08 09 1981 17.7 32.2 11
08 10 1981 12.3 32.0 9
08 11 1981 14.3 33.7 11
08 12 1981 15.7 34.3 10
08 13 1981 13.4 35.2 8
08 14 1981 16.4 35.1 10
08 15 1981 15.4 33.8 10
```


Search / Retrieve

What

Where

When

