miniSEED and StationXML: Request for Comment

IRIS Consortium Instrumentation Services Team

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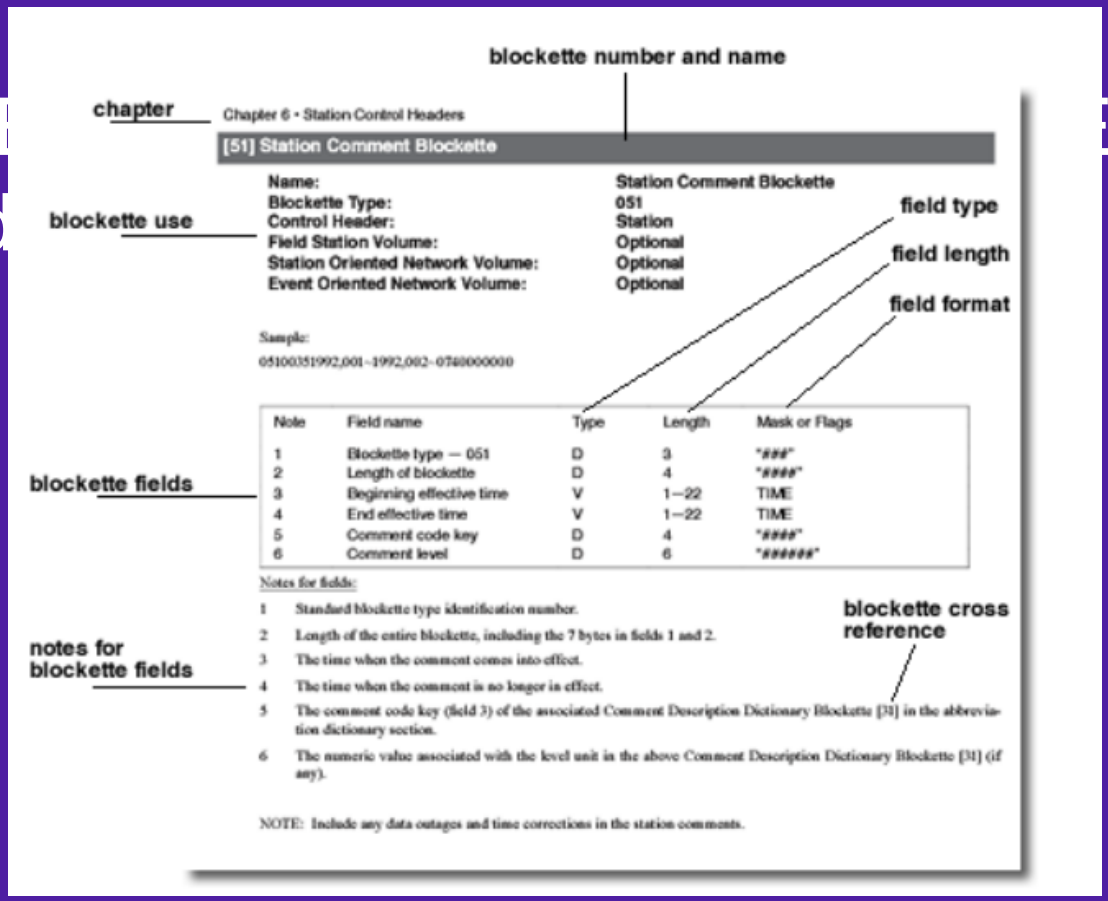
IRIS

SEED

- **Standard for the Exchange of Earthquake Data**
- **SEED v2.4:** August 2012 (v2 - February 25, 1988)
- miniSE… …ED: metad…



Ideas to update miniSEED

- **Network codes**: Up to four (4), 2 alpha followed by two digits for start year of temporary network
- **Timing Quality**: no current way to put in unknown/ cannot trust; push for a way to document
- Move blockette 1000 (data only (miniSEED)) to header
- Removal of unused blockettes
- **Compression**: Adopt one schema for compression of integers, floats, etc.
- **Fixed Point Data**: Pick a standard
- **Location ID**: Make it required, even if it's '--'
- **Minimal format considerations**: allow for shorter record lengths (important for EEW)

StationXML

- **XML**: Extensible Markup Language
- **Purpose**: XML representation of most important and commonly used structures of SEED 2.4 metadata
- **Goal**: mapping between SEED 2.4 dataless and StationXML with:
  - Little transformation or loss of information
  - Simplifying metadata representation when possible
  - Content and clarification added where lacking in SEED
  - Base schema to represent similar data types

Transition to StationXML

- IRIS DS: (**Goal**) Majority of metadata to StationXML by 2018
- **Translator tool**: transition away from dataless SEED to StationXML

(Available on IRIS SeisCode)

- Need to think about how to implement through Antelope (to sway users and instrument vendors to StationXML)

Potential Changes

miniSEED:

- Collins: increase timing precision, ie. ‘tick’ size (currently 0.1 ms)
- Collins: Clock corrections lead to non-integer sample rates. Currently, non-integer sample rates are accommodated by adding Blockette 100. Would be nice to avoid this.

StationXML:

- Collins: think about how the schema could incorporate tags unique to OBS work

Request for Comment will be the process by which we gather information to propose to DS