

Quality Assurance and Digital Mapping

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QUALITY

An essential or distinguishing characteristic
necessary for cartographic data to be
fit for use."

Harold Moeollering (NCDCCDS)

- * How does data quality affect us ?
- * What factors affect quality ?
- * How do we achieve quality ?

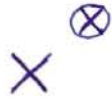


Paul Hardy
Chief Programmer

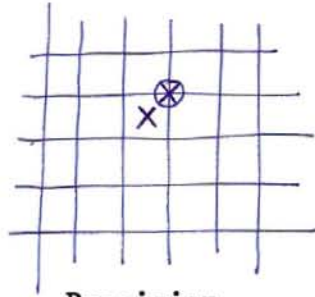
FACTORS IN DATA QUALITY

- * **Content**
- * **Completeness**
- * **Duplication**
- * **Precision**
- * **Accuracy**
- * **Structure**
- * **Coding**
- * **Elegance**
- * **Appropriateness**
- * **Ease of Access**
- * **Cost**
- * **Time**

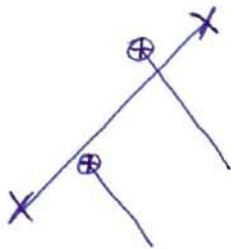
QUALITY PROBLEMS



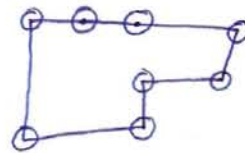
Accuracy



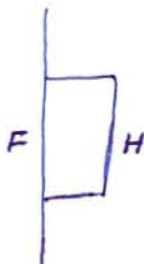
Precision



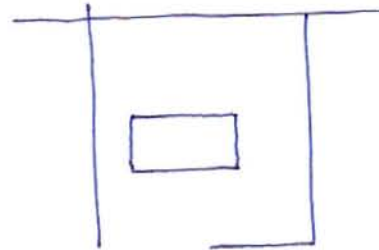
Structure



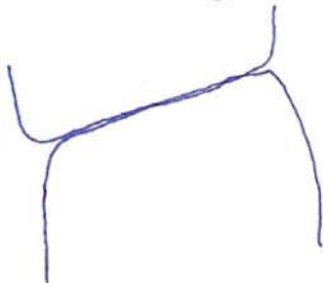
Elegance



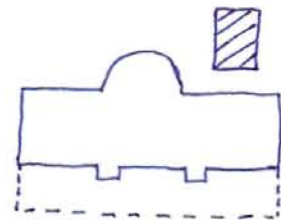
Coding



Completeness



Duplication



Appropriateness

STAGES AFFECTING QUALITY

- * **Human Analysis**
- * **Measurement**
- * **Drafting**
- * **Digitising**
- * **Registration**
- * **Transformation**
- * **Storage**
- * **Manipulation**
- * **Selection**
- * **Representation**
- * **Display**

Q.A. STANDARDS

- * ISO 9001
- * BS 5750
- * AQAP-1 and AQAP-13

SOFTWARE TOOLS

- * Standard languages - Fortran, 'C'
- * Graphics standards - GKS, CGM, 'X'
- * Open Systems - UNIX, POSIX, OSF
- * 'De Facto' standards - MSDOS, DEC VMS
- * Data standards - ISO 8211, ANSI X3.27
- * Transfer standards - NTF, DGIWG
- * CASE, Structured methodologies
- * Object Oriented Programming (OOPS)
- * Reusable software

PROCEDURES

- * Quality Plan
- * Code of Practice
- * Work Instructions
- * Design reviews
- * Code inspection
- * Testing
- * Publishing
- * Issuing
- * Problem reporting
- * Modification Approval

SUMMARY

- * Quality is in the eye of the beholder.
- * Quality implies purpose.
- * Absolute quality is a myth.
- * Quality must be designed in, not added.
- * Good quality can be achieved.
- * Achieving quality is an active not passive task.
- * Quality costs, but pays dividends.