

***FACILITATING QUALITY IN
GEOSPATIAL PROJECTS:
An Introduction to the EPA
Geospatial Quality Council***

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Presented to the

17th Annual Quality Assurance Conference

U.S. Environmental Protection Agency

Region 6

Dallas, TX

October 15-19, 2007

Notice

- Although this presentation was reviewed by EPA and approved for publication it may not necessarily reflect official Agency policy.
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Geospatial Quality Assurance (QA)

Short History

- Sharp increase in the use of geospatial science since mid-1990's.
- Most EPA QA requirements and guidance documents were created prior to the increase in use of geospatial science or geospatial work.



Geospatial Quality Assurance (QA)

Short History

- People had difficulty “translating” QA requirements and guidance into geospatial terms.
- More than two decades ago, the EPA GIS Work Group was established – did not directly address QA & QC
- The EPA Geospatial Quality Council (GQC) was formed in 1999 to fill the QA needs.



Geospatial Quality Assurance (QA)

Short History

- The EPA National Geospatial Program was established in 2002.
- EPA hired its' first Geospatial Information Officer in 2004
- EPA hired its' second Geospatial Information Officer in 2007
 - Jerry Johnston, Ph.D., EPA/OEI



Geospatial QA Authorities (drivers)

- EPA Order 5360.1 CHG 1 (1998)
 - *Policy and Program Requirements for the Mandatory Agency-wide Quality System*
 - Currently under revision
- EPA National Geospatial Data Policy
- Executive Order 12906
 - National Spatial Data Infrastructure (NSDI)
- OMB Circular A-16
 - Revised Coordination of Surveying, Mapping, and Related Spatial Data Activities
-and resultant NSDI & FGDC documents



EPA National Geospatial Data Policy (NGDP)

The EPA CIO released the NGDP May 2005, which describes the EPA policy of:

- Data Planning
- Data Collection and Acquisition
- Data Processing and Final Documentation
- Data Storage and Access
- Data Maintenance and Retirement
- Also touches...Roles & Responsibilities, Authorities, Definitions, and Waivers
- Yes.....QA & QC are included.



EPA Geospatial Quality Council (GQC)

Mission:

Provide Quality Assurance guidance for the development, use, and products and services of geospatial activities and research and to do so in an administratively efficient manner.



EPA Geospatial Quality Council (GQC)

Vision:

Enhance decision making and accessibility processes by ensuring that geospatial information is of known quality.



EPA Geospatial Quality Council (GQC)

Goals & Objectives:

- Promote a broader understanding of the value and benefits of Quality Assurance in the geospatial community,
- Facilitate and promote cross-organizational cooperation and dialogue on geospatial quality issues,
- Develop, test, and evaluate Geospatial-QA concepts, procedures, guidance materials, and tools, and
- Harmonize the approaches used in collecting, processing, and disseminating geospatial information.



EPA GQC Implementation

Education:

The GQC develops courses, presents training sessions, workshops and other media. The purpose of the education and training efforts is to educate the Quality Assurance Communities about Geospatial Science, and conversely educate the Geospatial Communities about Quality Assurance.



EPA GQC Implementation

Documentation:

Because of the growth and use of geospatial data and information, the GQC focuses on developing guidance documents. Guidance documents assist Geospatial Professionals in meeting QA policies, and conversely assist QA Professionals in evaluating geospatial plans and products.



EPA GQC Implementation

Consultation:

- The GQC provides expert QA consultation as technology, customers and requirements change.
- The GQC serves as a resource of experts that various EPA and external organizations can consult for their specific needs.
- The GQC also works with the legal community to ensure compliance with current laws, regulations and anticipated shifts in legal requirements.



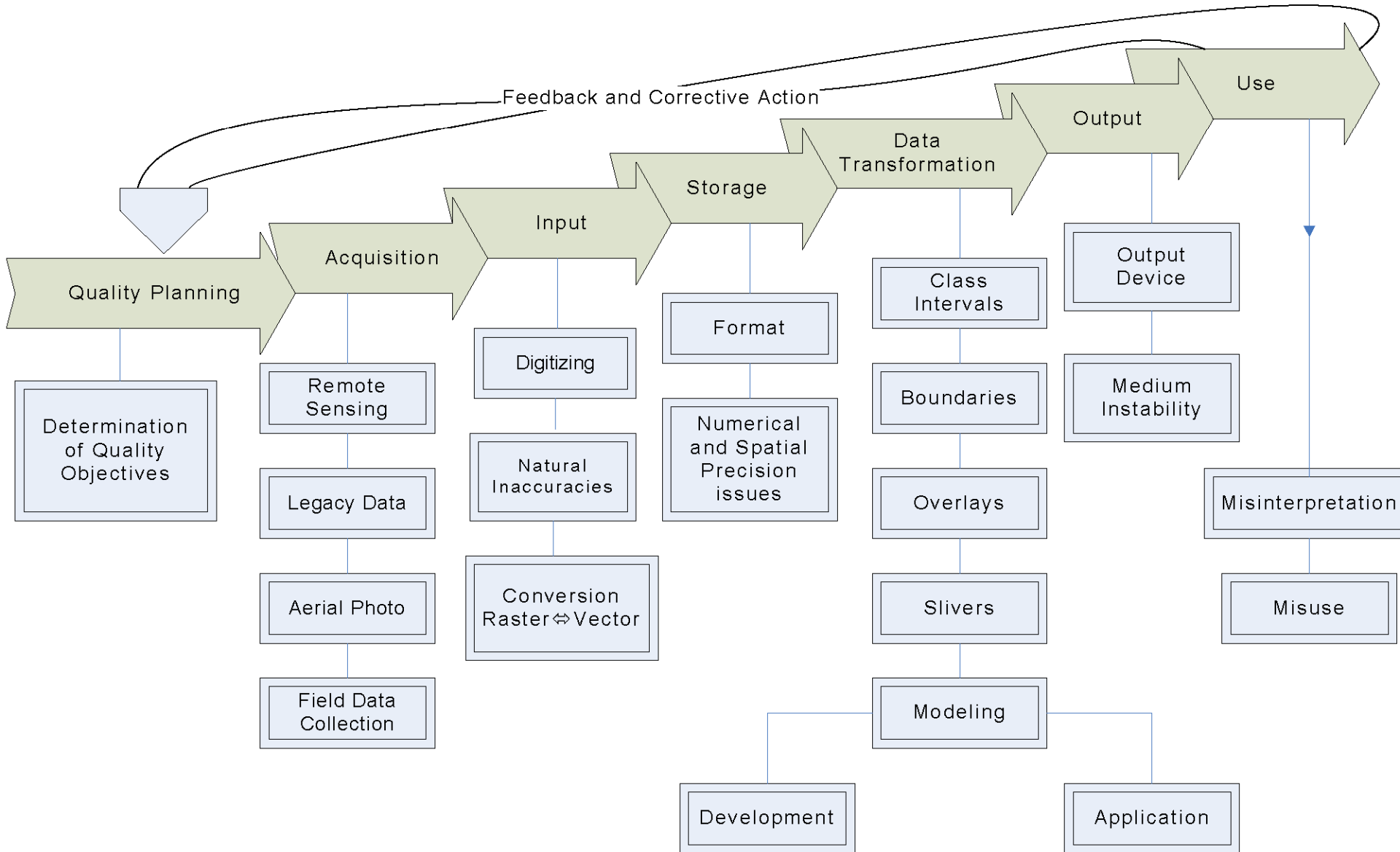
EPA GQC Implementation

Cooperation:

- The GQC incorporates various federal, state, and local government approaches to Geospatial-QA. In particular the GQC enhances the Federal Geographic Data Committee's (FGDC) efforts to bring the goals of a National Geospatial Data Infrastructure to fruition.
- Where possible, advances from institutions of higher learning are incorporated into GQC guidance documents. Feedback from the public regarding quality and customer service are also sought and the resultant suggestions and information is communicated to the appropriate EPA station for corrective action.



GEOSPATIAL INFORMATION LIFECYCLE AND SOURCES OF ERROR



EPA GQC Progress & Products

The GQC's most important contributions to date are:

- ***Guidance for Geospatial Data Quality Assurance Project Plans***
 - EPA **QA/G-5G** EPA/240/R-03/003 [released in 2001]

- ***Global Positioning Systems – Technical Implementation Guidance (GPS-TIG)***
 - Released in 2004 – revised in 2006

- ***GIS for QA Professionals*** course
 - Presented in 2000



EPA GQC Progress & Products

GQC Internet Site

- **Opened 2003**
- <http://www.epa.gov/nerlesd1/gqc/default.htm>

Numerous presentations have been made to a wide variety of audiences, including:

- Various State and Federal environmental enforcement organizations
 - Numerous Legal and Electronic Records symposiums
 - National Professional Organizations and Conferences
- »and more!



WHAT'S NEXT?

- Website Update:
 - Links to various geospatial portals
 - “Tools” page containing Templates, SOPs, checklists, etc.
 - Additional publications



WHAT'S NEXT?

- QA Categories
- IT/IM QA Guidance as a by-product
- GPS-QA SOP & QAPP Template
- Examples of Quality Management Plan, and Quality Assurance Project Plan



Right now we are.....

Implementing the “Graded Approach” in Geospatial Projects:

- Agreeing on QA Categories
- Integrating QA Category information into the Geospatial SOPs
 - (Noel Kohl)



For more information...

- EPA Geospatial Quality Council website
<http://www.epa.gov/nerlesd1/gqc/default.htm>

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