

LITTLE COLORADO RIVER
DATA BASE
ACTIVITIES PROGRESS REPORT
FOR
SECOND QUARTER OF FY-93



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**LCR DATABASE ACTIVITIES SECOND QUARTER FY93
PROGRESS REPORT**

January 1, 1993 thru March 31, 1993

I was hired as the System Analyst. I started by setting up a user login account and customizing my openwindows environment on the Sun IPX. I next proceeded to review the data. An arc coverage data book needed to be created to keep track of all the coverages. Each page of this data book contains information about one coverage. A map is drawn of all the coverage features (arcs, points, polygons) and annotations. A data items list is also included from the attribute tables (.pat, .aat). Developing the data book has been very valuable in quick and easy recall of the data resources. I found many of the coverages had been copied onto the system without being checked. Some only needed to be re-built to restore their attributes, while others had lost their attribute data. Many others had not been completely developed before being transferred to the Heritage system.

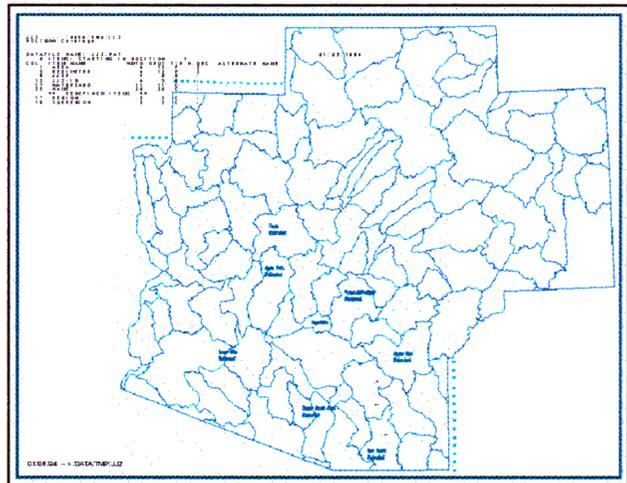


Figure 1 Example from the coverage data book.

The Sun hardware system includes Sun IPX w/ 2 gigabytes of hard drive, a Tektronix phaser III printer, Calcomp 9500 series digitizer, 4mm DAT tape drive, 1/4 inch cartridge tape drive. The PC hardware system consists of 386 compuadd personal computer and a scanner. These two systems networked together via Ethernet using PC-NFS.

Upon arriving I started testing the equipment, and I found the 4mm DAT drive was having problems writing, although data could be read from old backup tapes. I couldn't find any mention of this problem, or any other information readily available relating to system status. A system logbook was created containing logbook pages, hardware and software information. The hardware maintenance contract had run out, so no backups were done during this quarter. The PC communication failed. The Bibliography data base

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originally stored on the Sun hard drives had to be copied to diskettes and restored back onto the PC's hard drive. Some minor procedure problems developed when the Sun's DBASE IV and the PC's DBASE III programs versions were very different.

I developed Arc Macro Language (AML) programs to help quickly develop maps for those items normally included in a map. (ie., Navajo Nation seal, north indicator, title block, map border, vicinity maps). Once these amls were created map development became faster and easier. Arcedit form menus were created to expedite efforts to clean up coverages.

Two Digital Elevation Model (DEM) quads were received and loaded. DEM's are large data files containing X,Y,Z coordinate information at the center of each 30 meter data cell, naturally processing would be tedious and time consuming. While processing the Blue Springs quad, I ran into some Arc/Info software bugs. I found a work around solution to what I wanted to accomplish. That is a 50 feet contour coverage, but I'm not sure of the quality and accuracy of the coverage. The extent of data degradation due to the work around data processing won't be known until a more direct data processing route is available. Aspect and Slope coverages were also developed from the DEM data of Blue Springs quad.

Three SPOT images (Blue Springs, Cape Solitude, & Salt Trail) were received. Anxious to view the images to pseudo-test ERDAS Imagine software and compare it with Arc/Info's REGISTER program. I clipped and overlaid several coverages to use with registering. Registration points were difficult to find. This process had to be repeated many times before getting one of the images decently registered. Never having used the Imagine software before a comparison of the image registering technique and accuracy was not possible. In the beginning, I thought I might be able to quickly pick up on the Imagine software. Another reason for stopping this endeavor was the 1:24,000 scale images were registered to larger scale coverages covering most of the LCR basin. When smaller scale coverages are developed the images have to be re-registered. Towards the end of this quarter, I did attend a very short two-day course on Imagine.

I spend time reading the reports and memorandums written concerning the GCES project.. I have spent hours talking with Patrick Ryan, Wildlife Biologist, who has years of knowledge of the evolution of the project. A travel to Flagstaff for GCES meeting.

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The last week of the quarter, I walked down the salt trail to the Salt Trail Camp on the Little Colorado River. I witnessed hoop net and pit tagging techniques on the fishes caught. No Humpback Chub's were captured near the camp. The river was running high, fast, and sediment laden. Mist net were setup to capture and record bird species, size, maturity, fat content. Small mammal traps were set along the canyon walls and on the ground to identify species, size, abundance.

The Bibliography data base continues to grow editing, entering reprint numbers, filing, binding hard copies, typing in abstracts, and xeroxing unpublished papers. Hardcopy requests came in from Arizona Game & Fish, U.S. Fish & Wildlife Service, Arizona Department of Water Resources, and the Desert Fish Council. The Natural Resource Technician traveled to NAU (Flagstaff) and UNM (Gallup) libraries, and to GCES offices in Flagstaff to complete xeroxing Minckley's forty volume bibliography.

Periodically, the entire data base is reviewed for duplicate entries, unique reprint numbers, and error in data entry.