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DATA PROCESSING, STORAGE AND RETRIEVAL

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DATA PROCESSING

The objective of establishing a library of computer programs useful in statistical, numerical analysis, and optimization problems was reached in 1973. Over 150 programs were obtained, mostly from sources outside of the Desert Biome. Most programs required modification to be compatible with IBM compilers, and the modification problem was compounded when at the end of 1972 the Utah State University Computer Center changed from an IBM computer to a Burroughs B6700. Acquiring programs and making them operational is not a great accomplishment if a theoretical understanding of the data transformation imposed by a given program is not well understood. The data processing resource is really the proper use of methodology, and the training and performance of Data Processing Group analysts (Alma Olsen, Kim Marshall, Charles Romesburg) is strong in this area. Data Processing Methodologies (RM 73-51) was issued in September, 1973, detailing this work.

An accountability of the cost of computer usage was initiated in 1973. These costs were broken down by expenditures among employees of the Data Processing Group and by the researcher requesting analysis. Certain areas of saving were identified. Computer runs were allocated to a longer priority turnaround at the gain of reduced charges by the Computer Center. Also, a computer terminal was acquired which allowed far more efficient use of the programmer's time.

DATA STORAGE AND RETRIEVAL

The following statistics describe the computer data bank at the end of 1973.

Number of Cards in Data Set	Number of Data Sets in Class
0 — 20	37
20 — 40	37
40 — 60	26
60 — 80	21
80 — 100	26
100 — 120	21
120 — 140	10
140 — 160	6
160 — 180	13
180 — 200	10
200 — 240	19
240 — 280	21
280 — 320	16
320 — 360	13
360 — 400	17
400 — 600	36
600 — 800	21
800 — 1000	16
1000 — 1200	10
1200 — 1400	10

Number of Cards in Data Set	Number of Data Sets in Class
1400 — 1600	8
1600 — 1800	10
1800 — 2000	4
2000 — 2800	23
2800 — 3600	6
3600 — 4400	11
4400 — 5200	5
5200 — 6000	3
>6000	4
Total =	460

Data Sets assigned but no data yet received 171

Total Data Set. 631

Mean Data Set Size. . . . . .753 cards/d.s.

The flow of information to and from the data bank had been the responsibility of Verne King since 1971. Verne left the Desert Biome in late 1973 and has been replaced by Vicki Shinn. It is expected that the number of data sets added to the data bank will increase by 100 per year.