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REMOTE COMPUTING SERVICES CONTRACTS IN THE TELEPHONE INDUSTRY

REPORT TO

COMPUTER SCIENCES CORPORATION

APRIL 2, 1976

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I. INTRODUCTION

- The research for the study was performed by interviewing persons concerned with remote computing services in the telephone industry including those at:
    - Vendors dealing with the industry, particularly GE and Rapidata.
    - Bell Labs
    - New York Telephone
    - New Jersey Bell
    - Western Electric

- Questions to be addressed were:
    - How are contracts arrived at?
    - What are the terms and conditions of contracts?
    - What concessions/incentives do vendors give Telcos?
    - Specifically what pricing options are given?
    - To what extent are dedicated systems or systems fractions used?

  Any other information obtained on contracting with Telcos, including anything on projected changes, was to be included in the report.

- The study was also to identify the content and nature of further information that could be collected.

- The following sections address each question.

II. HOW ARE REMOTE COMPUTING SERVICES CONTRACTS IN THE TELEPHONE INDUSTRY ARRIVED AT?

- Contracts for remote computing services (RCS) within the telephone industry are arrived at in a number of ways:

  a) Through normal sales identifying problems and selling solutions.

  b) Vendor identifying a requirement, designing a system and selling to operating companies.

  Example: ANALIT

  ANALIT is a series of fault analysis programs which access a daily data base produced by the operating companies from line monitoring minis. The application was identified, developed and implemented for New Jersey Bell by SBC. As with all new procedure systems, it was submitted by New Jersey Bell for approval to AT&T. On approval, AT&T distributed the system as per policy to all operating companies who have the discretion regarding usage. However, AT&T approval and distribution does represent a "license to sell" for a vendor. Currently, it is estimated that SBC obtains approximately $12,000 to $20,000 per month from the use of ANALIT by operating Bell companies and that approximately 15 other applications have been sold in this manner by vendors. This type of sale also produces very high vendor loyalty regarding the application.

  However, SBC has just lost this business to GE at New Jersey Bell: GE expects about $25,000 per month from the contract. There is some surprise at how easy it was to push out SBC - perhaps SBC is reducing its committment to this market.

  c) Bell operating companies request systems from Bell Telephone Labs. Identifying BTL projects and solutions are generally tied to vendor equipment.

Examples: BISCOM, COBIS

BISCOM system designed to meet requirements of one operating company and subsequently sold four others. Section responsible designated Xerox equipment for implementation as vendor was known even though future continuity was doubtful.

COBIS (Central Office Business Information System), again section responsible primarily used GE service and, therefore, developed system with them without considering alternatives. Six operating companies sold to date.

d) Supplier and Telco jointly identifying, designing and implementing system (release by Telco for other Bell Companies).

Example: ESS CUTOVER

Group within New York Telephone responsible for construction of new exchanges and changeover identified problems to Rapidata who, in turn, identified problem as CPM/PERT application. Rapidata, therefore, modified and assisted in writing and producing documentation. As personnel within New York Tel have feeling of involvement, they have assisted in recommending and selling to other operating companies (e.g., New England Tel, Southern Bell, etc.) on basis of recognition.

e) Hiring a recently retired AT&T executive as a vendor consultant.

Example: McAuto

Having decided to mount a concentrated effort to penetrate the telephone company market of which they had little knowledge, McAuto hired early retirement senior AT&T executives as consultants. These people were able to supply information regarding policy and procedures, short and long range planning, organization, contacts and introductions to decision makers. McAuto has also supplemented this successful planning tool with a recruitment effort of hiring Field Sales personnel with experience in selling to the telephone companies.

III. WHAT ARE THE TERMS AND CONDITIONS OF CONTRACTS?

- The terms and conditions of most vendors' contracts vary from one month to one year to three year terms with standard renewable options. The one to three year terms generally carry monthly minimums for the individual operating company.

- One vendor (GE) has a "Readiness to Serve" contract (minimum $10,000 per month) spread over all operating companies on a proportional usage basis.

  This contract, which is with Western Electric, is the only one known to exist under the "Telnet" concept, whereby Western Electric acts as the purchasing agent for blanket timesharing services to Bell companies. This contract is up for renewal now and will probably be replaced by a contract under the current Western Electric RFP for timesharing services.

  Under this contract, which is GE's main telephone company contract with estimated revenues in excess of $10 million per year, each Bell company forecasts its use of timesharing under the contract for the next year. These forecasts are totalled and each company then becomes liable for its proportional share of the minimum. The forecasts are believed to be based on the regular rate. As described later, GE provides a discount on the service. GE bills each company independently and that company gets the discount.

- The boiler plate sections of most vendor contracts contain the standard legal indemnifying sections. The Telcos require the major vendor to stipulate performance standards and maintain these levels. These standards are normally industry defined and relate to an availability level during published hours of operation. For example, availability of 99 percent during normal operating hours 8:00 A.M. to 11:00 P.M. Serious violation of performance levels generally require some adjustment by the vendor. (For the most part, the Telcos are cooperative.) No reliability or backup standards are known to exist in any present contracts except a

guaranteed minimum number of hours of availability per month. Also, no specific penalties are known to be stated in any contracts for breach of contract guarantees.

IV. WHAT CONCESSIONS/INCENTIVES DO VENDORS GIVE TELCOS

- Generally, vendor concessions and incentives offered to the Telcos are price oriented. Major vendors discount their service based on guaranteed minimums from 20 percent to 50 percent of list.

- Major discounts on storage and access for certain data collections systems is another concession. These concessions are generally offered supplementary to the main agreement and are negotiated relevant to a unique application or infrequent need. The circumstances are normally such that without special pricing, the Telco's could not afford to use an outside vendor. Examples would be the need to have on-line,for a very short period, an extremely large data base (i.e., 200+ million characters for three days every third month) or a large number of system ports available (i.e., the need to have 100 terminals on-line for one day every month-end).

- As an inducement to use non-prime time, one vendor credits such time against prime time usage contractual minimum.

- Documentation is generally supplied free of charge by the vendors regarding their standard system, language and applications publications. Most supply is by request and nobody automatically supplies large volumes. Telcos are reluctant to pay because of this historical vendor habit.

- Standard training regarding a vendors' service or products is normally supplied free of charge. Non-standard or Telco requested training is often chargeable and they are receptive to expecting to pay. Particularly acceptable are in-house training sessions.

- Other services such as media conversion are normally charged for, either at standard price list or negotiated price.

V. WHAT PRICING OPTIONS ARE GIVEN BY VENDORS?

- Major vendors offer multiple pricing options where they charge different connect rates, different input/output character transfer rates for the different line speeds used. 110 to 300 baud generally is billed at the low rate and 1200 baud, voice response and high speed (2,000 - 4,800 baud) service is billed at a higher rate. Storage units are defined differently and are priced accordingly. There is generally a 30 to 50 percent reduction for non-prime time service. A number of remote computing suppliers have a scaled discount above the minimum level (i.e., the greater the usage the greater the discount). Some Telco applications are transaction priced by the vendor (e.g., Operator Scheduling).

Examples of Pricing Options

a) Single Telco Agreement

GE is the only company known to have an "umbrella" contract with the AT&T family. This contract was originally negotiated with Western Electric and was subsequently modified to cover automatically all AT&T companies including WECO, Bell Labs and the Bell Operating Companies. It is a "Readiness to Serve" contract and offers a standard 20 percent discount of published price list on most GE services. However, as the prime vendor, GE has managed to negotiate separate discounts for subsequent services it has introduced since the original contract. High speed service is an example where GE does not give the full 20 percent to Telco. The contract, which is for one year, maintains a low committment ($10,000 per month minimum); to identify proportioned responsibility for the minimum, each user unit must give to GE its forecast yearly usage.

b) Dedicated Systems

Rapidata has, so far, been the most successful vendor with the dedicated systems approach mainly because of New York Telephone. The general terms it offers are similar to most

other vendors, the extent of its penetration within New York being the significant factor. Presently, Rapidata has contracts (three years each) for dedicated H400's and DEC System 10's. Under the arrangement, New York Tel has unlimited access to two dual H435's (total four systems) for a minimum charge of approximately $230,000 per month. It is estimated throughput on these systems has reached standard Rapidata price list level equivalent of $700,000 per month. The DEC System 10 agreement allows for growth and operates from a minimum 50 percent utilization (and availability) to 100 percent dedication of a system. Pricing is much more complex until New York Tel commits to the total systems, but the effective discount is expected to be higher than the H400's. For reference it is estimated by Rapidata that their DEC System 10 has approximate throughput capability of two dual H400 systems.

c) Dedicated Ports

Dedicated ports are offered primarily in three forms:

- Physical ports:

  Example, Rapidata's contract with New Jersey Bell for specific number of ports with unlimited connect, processor and free storage up to limited allocation. (NOTE: This is being renegotiated to a straight discount agreement.)

- Software ports:

  Example, NCSS' charging on transaction basis with access to specific application only.

- Continual Access ports:

  Example, GE's "Continual Access Plan" which has a fixed monthly charge of $300 per logical port. This allows access at up to 1200 baud, including TIP. Additional charges are transmission at 20¢ per kilo characters for prime time and 5¢ per kilo characters for non-prime time and standard processor and storage charges.

d) Transaction Pricing

The best known area for transaction pricing by vendors is in the Operator Scheduling application area. Two of the prime products are FADS (Telephone Company Force Administration Systems) and TOURS (Telephone Company Tour of Duty Scheduling). These systems originally produced by the Telcos and dependent on Telco supplied data bases have been converted by and are available on many of the prime vendors' services.

Because they are very heavily central processor bound, it would cost between $60 and $80 per schedule to run at normal price list on an interactive service. Therefore, most vendors 'transaction-price' the use of these applications between $6-$11 per schedule. While this is a range of 80 to 90 percent disount, support costs are minimal and volumes are enormous.

Companies with operator scheduling revenues which have been identified are as follows:

- McAuto, as identified by CSC, S.W. Bell is a major user; PT&T also has used McAuto for operator scheduling.
- GE is very competitive in operator scheduling. They have a new product scheduled for release soon. It will be a combined interactive remote batch system in order to give rapid response and cheap processing of massive data required.
- COMSHARE; Bell of Pennsylvania is a user. The total account is worth $360,000 per year to COMSHARE. Incidentally, COMSHARE lost almost all of its New York Tel business to NCSS.

- Rapidata, which has New York Tel, New Jersey Bell, C&P, and Southern as clients.

(CSC was identified independently by two vendors when looking into this area. They are looking at CSC business as a target, specifically $40,000/month at PT&T, and $10,000/month at New York Tel. They want to keep CSC out.)

National CSS has no operator scheduling revenues that we could identify.

AT&T itself will be aggressive in this area: it will have its system (IFAM) installed on a dedicated 370/158, which is now out for bid.

e) Fixed Discounts

Some smaller vendors offer a standard fixed discount to any telephone company which uses its services and most only have a token minimum charge. Examples are Fulton, 50% off list and ACTS, 50% off list.

f) Sliding Scale

Very few of the Telephone Industry major suppliers offer a sliding scale discount plan. Most prefer to renegotiate a higher discount level in exchange for higher minimum commitment. However, newcomers generally offer a sliding scale discount plan as an incentive to expand use of their service.

g) Advance Payments

Many of the major suppliers who have long term contracts (one to three years) with a stated minimum expenditure level manage to charge Telcos one month in advance for this minimum. One should remember that it is Telco's policy to charge its customers in advance for service minimums. Rapidata, for example, is paid one month in advance by New York Tel for both its dedicated system contracts with them.

VI. EXTENT OF USE OF DEDICATED SYSTEMS OR SYSTEMS FUNCTIONS

- The early concept of a dedicated port was a marketing tactic used by vendors in selling to Telcos. Whether it was a physical or logical port, the theory was that for a fixed price the company had unlimited access to the port. In a lot of instances, it accomplished its aim -- to secure business. In some instances, the vendors' equipment was effectively utilized (throughput) and effective discounts were 15 to 20 percent higher than planned. Most vendors now have a straight discount based on dollars billed because of lack of control in the Telco users environment. One major vendor, GE, still sells a "Continuous Access Plan" which is a fixed monthly charge per logical line. Another supplier dedicates one or more complete systems to serve a telephone company. In this instance, the Telcos have sole access to the system(s) for a fixed fee over the term of the contract.

- There is an increasing interest among Telcos to the approach of using dedicated systems from outside services vendors. As yet, it is still very unpopular with most of the vendors primarily for two reasons; past experiences with dedicated ports, and lack of experience in Facilities and Resource Management situations. Rapidata is an example of a vendor which has successfully pursued this approach with a high profit return.

- The new NCSS agreement with New York Tel, while being presently a discount deal, does allow the Telco to move on 90 days' notice to a dedicated system when the load grows. For information, the present format of the agreement is that New York Tel shares a 370/158 with commercial users. It covers a three-year period and has a minimum of $100,000 per month. Discount levels are:

List Price Level of Usage	Payment
$0 - $134K/month	$100K
$134K - $150 K/month	112K
All billing over $150K/month	65% discount

i.e., Months bill at list = $151K
New York Tel pays = $112K + (35% x $1,000)
= $112,350

Present level of usage for January/February, 1976, is around $100,000. At $150,000 per month, New York Tel could excercise the option for a dedicated system.

- Apart from dedicated central processors, the Telcos are very interested in both on-site and remote, dedicated,communications minis. As they regard themself as "communications" experts, they would like control of this part of the service supply. Many vendors have started or plan in the future to follow this route to accomodate line concentration, remote media conversion, linkage or unique peripherals, non-standard line transmission rates, etc. needed by the Telcos.

VII. ADDITIONAL INFORMATION

GE Contracts with Western Electric and GTE

- AT&T regards WECO as its purchasing agent.
- Theoretically, all Bell Telephone Company purchases of remote computing services should be under the 'Telnet' umbrella. However, GE is the only vendor with such a blanket contract. The stipulation is unenforceable in any event, since each Telco has a considerable amount of autonomy - for instance, the majority of directors on any Telco Board is composed of non-AT&T people.
- Under the WECO contract GE gives discounts up to 20% to individual Telcos and has no restrictions on selling to end users.
- This contract is up for renewal now and is the prime reason for the current WECO RFP. It will probably be replaced by a new contract under this latest procurement.
- Western Electric is unable to force its own users to a single source.
- The GE contract with GTE is completely different; it is a 'wholesale' supply of resources to GTE which then markets them to the end users in GTE.
- GE is specifically forbiddent to talk with any GTE end users: all requests for information are referred to GTE.
- This contract currently runs at about $50,000 per month at discounted level - the discount is unknown, but is considerably greater than the WECO contract because there is no marketing.
- GE does not like it because it cannot be developed and they don't have control.

- UCS is actually the prime vendor to GTE with about $125,000 per month. It is very likely that UCS is supplying operator scheduling to GTE.

- GE also has Continental as a regular customer - they are close to GTE. There are no significant revenues to GE from other independent Telcos.

- UCS is probably doing best as a vendor to independent Telcos.

WECO RFP

- Western Electric would apparently like to have one, or a maximum of two, main outside remote computing services vendors to the Telcos instead of the current 8 to 10. These vendors would be under a blanket contract, as GE is at present.

- WECO recognizes that this is unachievable right now, but they hope that there will be 5 or 6 main vendors that will emerge from the present contract.

- Both GE and Rapidata expect to make in-roads as a result of this contract. Some smaller companies may get 'bounced'. Main advantages to selected companies will be opportunities to replace non-selected companies' busines because of identification and level of discounts, and that new business will primarily come to selected companies.

- GE probably won't change its strategy except, perhaps, in new areas such as its IBM services, or refurbished remote batch services.

- A prime part of the RFP is the EPLANS group services. These are required for 26 current projects which are mainly supplied by outside vendors. There could be some serviced by in-house sources right now which may be converted to outside services.

- A comment was made by a WECO contact that the handling of the EPLANS project may not be the key to the contract - blanket timesharing contracts may be the prime thrust for WECO.

- As far as offering operator scheduling under this contract is concerned, since AT&T will be pushing its own operator scheduling our opinion is that WECO will probably not want to have vendors pushing their operator scheduling under this contract.

- From what we could gather, other vendors think only 6 companies received the RFP: GE, McAuto, Tymshare, NCSS, CSC and Rapidata.

- As far as we can tell, no major changes in strategy or approach are projected. Vendors are mainly concerned with what the Telcos want.

- Vendors don't appear to be worried too much - basically people want to look good in their response, for the record. Vendors are generally comfortable with the existing situation.

Other Vendor Revenues and Positions

- McAuto receives $200,000 per year from S.W. Bell. Another large account would be with the EPLANS group at Western Electric, at about $100,000 per year.

- This market is still relatively new for McAuto. They have spent a lot of time and effort on penetrating the market through building a senior management (in AT&T terms) group and experienced marketing people with proven success in selling to Telcos.

- They now have a foothold with possibly 12 Telcos. Clients built-up over the last 12-15 months. Now they will aggressively pursue the business.

- Their strategy is not to have heavy discounts but to combine capability (massive number-crunching, and data base capabilities through their Cybers and 195s) with reasonable price.

- They are more interested in future than current business, although they will be strong competitors with NCSS in the engineering area (NCSS has over $8 million in revenues, primarily in engineering departments).

- SBC is currently at $2 million revenues approximately. However, as previously noted they may not be emphasizing this market.

- Tymshare has approximately $2-3 million with the Bell system. It obtains major revenues from the COES (Central Office Equipment Supplies) application. This was designed by Bell Labs.

- Tymshare obtained this contract on open bid about 2 years ago: Rapidata and Tymshare were finalists. Bell Labs, PT&T, and New York Tel use it to the tune of about $1 million per year. PT&T spends about $40,000 per month.

- It would be hard to get this business from them.

- Multiple Access does about $1 million per year, with New York Tel. About $40,000 per month is bought from the Rapidata 145 for resale.

- There are a lot of other companies with miscellaneous, but significant revenues. Total market is perhaps as large as $60 million per year.

Final Comments

- No one seems to have a really good plan for the business, except perhaps McAuto.

- Relatively small numbers of people required in support of the contracts: for example, Rapidata has only 6 people in support of $400,000 per month of revenue.

ADDENDUM:

- According to a conversation with a New York Tel timesharing user, AT&T is in the process of examining PT&T and New York Tel's use of timesharing. The question put to New York Tel was "Why are you spending over $10,000,000 a year on outside services you could perform in-house?" The response was that it was cheaper!

- Also, he mentioned that there were at least three vendors of operator scheduling to New York Tel the last time he looked: CSC, GE, and Rapidata.

- The NCSS contract gives them a 25% discount up to $100,000 per month and 50% over that level.

- In the medical area in New York Tel, Rapidata does about $170,000 a year in handling medical data bases.

- Apparently, they really like NOMAD (NCSS' data base language). Also, NCSS is about to release a further improvement to NOMAD in two weeks or so which will handle 'relational' data base structures.