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March 30, 1965

Mr. W. G. H. Acheson:

Attached for your personal use and information is a statement of our Company goals. It is along the lines of our many recent discussions.

W. G. H. Acheson

Russell

attach.

This brochure outlines, in general terms, the future role of Western Union as a nationwide information utility, which will enable subscribers to obtain, economically, efficiently, immediately, the required information flow to facilitate the conduct of business and other affairs. It outlines, also, the manner in which the network of Western Union's field offices and employees will complement such a national information system, as the Company broadens the range of public services provided through those offices.

SECTION I

Western Union's Future Role as the Nation's Information Utility

Over the past century or more there have evolved in this country a limited number of basic systems serving the general public, a group generally termed "public utilities." These utilities serve, among others, such fields as transportation; communications (telegraph, telephone, cable, radio, the broadcast services, etc.); and the energy systems, distributing power.

What is now developing, very rapidly, is a critical need - as yet not fully perceived - for a new national information utility which can gather, store, process, program, retrieve and distribute on the broadest possible scale, to industry; to the press; to military and civilian government; to the professions; to department stores, banks, transportation companies and retailers; to educational institutions, hospitals and other organizations in the fields of public health, welfare and safety; and to the general public; virtually all of the collected useful intelligence available, through locally-, regionally- and nationally-linked systems of computers. Just as an electrical energy system distributes power, this new information utility will enable subscribers to obtain, economically, efficiently, immediately, the required information flow to facilitate the conduct of business, personal and other affairs.

There is no substantial technical bar even now to the establishment of such a nationwide information utility. Computers and associated equipment, the methodology, the storage and retrieval techniques, the knowledge required to provide the very broad bandwidths required for high-speed data transmission - all these exist today. Their harnessing into a national system presents no technical problems essentially more difficult than the strategic placements a half-century ago of steam turbines to create electrical energy, and the related building of power grids and distribution facilities to provide large, regional electrical power generating and distributing systems.

The explosive rate of growth in the computer field can be judged by the best-informed industry estimates that, by 1975, computer revenues (stated on a "leased rental" basis for ready comparability), will rise to about \$12 billion annually, as against a current level of about \$2 billion. The 1975 market is expected to comprise about \$2 billion annually from very large computers; about \$7 billion from those of medium size; the remaining \$3 billion would come from the small computer field.

The computer today - and there are more than 20,000 now in use in business, and thousands more in governmental and scientific service - is generally at a state of development comparable with that of the turbine some 50 years ago, when the shaping really began of the

massive electrical distribution systems now in being. Indeed, the computer and the turbine share a common characteristic in that (within appropriate limits of optimum sizes and capacities), the larger the unit, the more efficient it is in terms of unit-cost production. It should be added that the turbine has been progressively improved in the intervening years, but it has not been fundamentally altered from the efficient, economical, dependable form in which it was put to effective use, decades ago.

The computer, in its more than 20 years of development, has now taken on certain basic and fundamentally similar characteristics in respect of capabilities, capacities and speeds so that - despite differing designs, techniques and methodology - there are no insurmountable problems which would prevent the installation of computers supplied by different manufacturers, in any one or a series of centers, and the linking of such computers of varying makers to provide "information," just as an electrical energy system furnishes power to plants, offices, stores and people. There are still some "language" problems in the varying code levels used with different computers; essentially, however, these problems are no more complex than the like ones that arose many years ago with respect to steam turbines, when the two types in most general use operated either at 25- or 60-cycles. Just as standardization - and the ultimate, generally-accepted superior merits of the 60-cycle turbine - resolved that problem in the field of energy distribution, it can also be taken for granted that "language" and other problems of compatibility and interchangeability in the computer field will be settled.

From time to time, this brochure refers to the rough analogy between an information utility and a power system, in that each would serve a widely disparate set of users, some with huge, "heavy industry" kinds of requirement, and others with only modest or occasional needs. Just as a power system must be as capable of supplying electrical energy to run a large manufacturing plant as it must also be of providing the needed power for a modest office or home - so, too, would an information utility be ready to furnish service to all users, to be drawn upon as required and paid for according to the service supplied. The cardinal economic principle at issue here is that an information utility serving a large number of users can provide service to each more economically than he can provide it for himself, just as a power system can provide energy to its customers at lower cost than they, individually, can generate it for themselves.

Let us look, briefly, at some possible demands upon an information utility by some of its customers:

Department stores, supermarkets and many others in retailing could obtain their requirements for inventory-keeping and re-ordering, for departmental sales figures and other business data, through constantly-available, immediate access to a computer system that would provide similar links to headquarters offices, warehouses or to suppliers.

Brokerage, banking and finance firms could daily, hourly or instantly process, gather, transmit or obtain figures on buy and sell orders, customers' accounts, cash balances, loan payments, etc.

Lawyers could obtain immediate access to computer-stored records of precedents - or even to entire libraries; similar applications in respect of doctors and other professions could make available instantly in even the smallest community the whole body of accumulated knowledge to aid in diagnosis and treatment.

Schools and colleges can pool and exchange information and make the libraries of each available to one another; airlines, railroads, bus and truck lines can keep in closest touch with passenger, freight, weather, waybills and other pertinent data; business generally can expedite sales, production, payroll and other functions - this list is virtually endless.

It goes without saying, too, that any national information utility would necessarily be prepared to meet all civilian and military governmental "informational" requirements, as well as those of business, the press, general public and others.

Looking not too far beyond these quite obvious but important examples of ways in which industry, government, institutions, and the various professions can put to use quickly the computer - (provided by an information utility which will sell just the tiny portion of a computer's capacity each individual may require) - inevitably there will be constantly-widening public demand for the information utility to store and program, for instant retrieval and furnishing, information about weather, plane arrivals and departures, the day's news, stock market information - all of which, and much more, can readily be made part of the "information" constantly available. As further examples of possible general public use of an information utility, professional men, business men, and individuals generally could greatly simplify personal record-keeping; purchases and payment of store accounts, taxes, mortgage, insurance and other transactions.

As the foregoing examples will indicate, an efficient, coordinated system of information storage, programming, retrieval and transmission should look to providing all the information service required and wanted by any and all kinds of customers - again, just as a power system furnishes energy to government, to industry and to people. (Quite in the minority is the user who today runs his own power plant - and correspondingly rare will be the organization that furnishes its own information service - once it can purchase all it requires at lower cost.)

It would be difficult to over-estimate the great volume of information work (of the kind such a utility would provide), that is now being done piecemeal, company by company, and organization by organization, throughout the country. In the same analogy used before, it is as though each of the thousands of computer-using firms were also separately generating its electrical power - which of course can be supplied most efficiently and economically by a power utility.

Thus, what is now almost literally upon us is the opportunity and the challenge to provide a rational, coordinated national information system that will ease, simplify and strengthen the conduct of national affairs; bring new efficiencies to business and industry that will place us in the strongest possible competitive posture vis-a-vis the nations abroad; improve, aid and facilitate the development of the country's whole economic structure. This country, which had the first, integrated national telegraph system; and was first to possess an efficient, coordinated telephone service; will be the first to have an efficient, nationwide information system - one that will as radically differ (in the public needs met and the ways for meeting those needs) from the telephone system, as that system in its turn differed from the telegraph service, in purpose, function and public needs.

It must be clear that an information utility will require fundamentally different and more advanced transmission facilities than the voice bands which are the essential building blocks of the telephone business. The linking of sophisticated computers as the basis for storage, retrieval and instant availabilities of huge stores of data will require bandwidths far broader than those adequate for telephone service - and for the ancillary data services carried over those telephone lines now. In another rough analogy, the 150-cycle telegraph circuit was as inadequate for voice, as the 3000 cycle voice circuit is now unsuited for high-speed data requirements.

There must, then, be a whole new nationwide system of broadband facilities, designed as specifically for the special functions of an information utility as Western Union's transcontinental beam system was built for the high-speed movement of data. Nor will it

suffice to build broadband facilities limited to intercity routes - large users of information will also need much broader local bandwidths than a voice band - just as large users of energy need local connections with power plants heavy enough to meet their needs.

We envision, then, the expansion of the existing plant, offices, personnel, and nationwide operations of Western Union, to transform it into a national information system. Just as computers are used now in the highly sophisticated military and civilian government systems Western Union provides; as more and more of the commercial systems it leases are computer-adapted and oriented; as its program for the integration of public message and exchange service looks to the employment of computers; just so can all these and other data systems in the making be integrated into one national information system.

These are the fundamental qualities of such a system as to structure and organization, as Western Union sees it:

It would furnish a uniform, efficient, integrated information service to meet the needs of all types of users, everywhere.

It would provide service of the highest attainable quality and, under regulation, would charge the lowest possible rates consistent with the payment of fair wages and an adequate return on invested capital.

It would do no major manufacturing, but would instead seek for the most efficient and satisfactory suppliers of computers and every other kind of required equipment.

The information utility would, in all instances, provide the standard terminal facilities linking users' premises with the utility. It would also, as desired by users and as required by the nature and scope of the services to be furnished, provide outstation equipment of appropriate types and design for use on customers' premises. Additionally, it would establish uniform standards for compatibility with the national information system so that, where appropriate, outstation equipment provided by users could be connected to the terminal facilities furnished by the utility.

It would seek to work with the independent telephone companies by offering to join in local or regional approaches to the furnishing of information services by local telephone companies, in partnership with Western Union.

Just as a number of local or regional companies provide both electricity and gas, independent telephone companies would be encouraged to provide both telephone and "information utility" services in their respective territories.

(It might be added, here, that any movement by the Bell System to substitute itself for Western Union as the nation's information utility, as well as the pervasive, dominant power in the telephone field, would obviously create profound national concern on the score of "giantism" - since any further and large assumption of added power would bring about one entity of even more menacing size than now. No such danger, of course, exists with respect to the independent telephone companies, whose functions and positions would be strengthened by the broadening of their roles.

The establishment of the Communications Satellite Corporation is the most recent and effective evidence of the deep concern felt by government generally as to the dangers inherent in further and enlarged expansions of the functions and powers of the Bell System. There can be no question from the Telstar experiments that AT&T had the technical capabilities to do the job, from the ground station up. But, nevertheless, there was a quite well-understood, and frequently-voiced general apprehension as to placing one more large sector of the nation's economy and future in the hands of the world's largest corporation.)

It would, to the maximum degree consonant with efficient operation, in the light of the foregoing paragraphs, federalize the character, pricing, service, standards, techniques and methods for meeting the public's needs, through its services; it would similarly regionalize, in organizational and corporate structures, to bring its operations as close as possible to the publics served.

It would of course continue to provide all its present services, and would seek, to what would seem likely to eventuate to a very substantial degree, to broaden the availability and reduce the costs of services now provided, as the use of the Company's plant to fill all the appropriate functions of an information utility improved the profitability of its operation.

It would be willing, in the public interest, to explore the extent to which the extensive, new system of broadband facilities required for Western Union's use as an information utility could be brought into being in conjunction with the Bell System, so that appropriate parts of such a new broadband system might also be utilized to maximum degree by Bell for furnishing voice and other service in its own area of activities.

This is perhaps an appropriate point at which to stress the factors that uniquely qualify Western Union to provide such a broad, new, national service. These factors include:

There would be an end, once and for all, to any threat that, by sheer size alone, the grotesque disproportion between a \$35 billion Bell System and a less-than-half-billion dollar Western Union may otherwise bring about an ultimate total monopoly by Bell in all areas of telecommunications. With the expansion of Western Union's services into the role of the nation's information utility, coexisting with the huge Bell System within the proper limits of facility-sharing and other public interest factors, there would be assured, strong and effective competition between the "voice company" and the "data company" that would endure for as long as can be foreseen.

The adoption of courses of national policy in the telecommunications field that would, after appropriate consideration and examination, accept such a future role for Western Union as being in the national and public interest would have the further advantageous fact that the problem of establishing a sufficient economic base to support the provision of a nationwide telegraph service would be solved.

The fundamental character of the Company's general business, which from its beginnings has been the development of data systems for the movement of data - reducing data to its basic identity - information.

Western Union is already providing the Department of Defense with the largest and by far the most sophisticated data system in the world; it is now engaged in doubling the size of this incredibly complex system to meet new, national needs.

Western Union is readying a comparable, computer-oriented system to meet the civilian requirements of government in the data field - the new Advanced Record System for GSA.

Western Union is increasingly engaged in designing, providing, installing and maintaining similarly data- and computer-oriented systems for industry. In addition to the proof these military, civilian government and industrial systems afford of the Company's capabilities, it is evident that a substantial nucleus is already in existence and is being progressively expanded for such an information utility as Western Union envisages.

The modernization program Western Union has already started to marry the public telegraph system and the modern exchange systems it provides, including the latest data-designed Broadband Exchange Service, will use computers and other data-oriented equipment and technology in precisely the fashions needed to establish an information utility. (The presently available trans-continental backbone radio beam system, specifically designed for high-speed data, is exactly the kind of system that will be required nationally.)

Western Union's firm policy of buying, rather than itself manufacturing, computers and all other needed equipment would obviously contribute to our free enterprise system, rather than to freeze out most potential suppliers through company-owned factories.

The announced Company policy of working in closest cooperation with the independent telephone companies in establishing the regional arms of such an information utility would clearly strengthen these vitally important parts of the economy, and add to their ability to remain separate, viable elements in our competitive, American system.

Western Union's "interface" with the public, the operation of Company-staffed offices in more than 1,300 cities across the nation, and the provision of telegraphic services through more than 12,000 other telegraph stations, provides a unique basic network of offices and people to establish such an activity.

Unlike the Bell System, already of such enormous proportions as to strain the capabilities of regulation, Western Union is by comparison with Bell

so small an entity - about one-sixtyfifth of Bell's size - as not to create the national hazard of giantism that would arise if Bell were to add these new, data services to their present effective monopoly in voice.

his, then, as we foresee it, is Western Union's future role - the company will seek, in the simplest terms, to establish an information utility that would make it unnecessary for the customers of such a utility to "manufacture, store and supply" their own information requirements - exactly as the availability of an efficient power system minimizes the number of customers who generate their own power.

Western Union has the skills and experience that uniquely qualify it for such a role; the public need for such a new utility is growing at a rapid rate; the field is already large and the potential tremendous - probably at least as large as any other national utility that exists today.

The network of Western Union offices and employees will admirably complement such a national information system, as the Company broadens the range of the public services provided through those offices. This phase is further described in SECTION II of this brochure.

SECTION II

1e Future Role of Western Union's Public Offices 3 "Department Stores of Services."

The first section of this brochure, describing Western Union's future transformation into a national information utility, ends with the statement; "The network of Western Union offices and employees will admirably complement such a national information system, as the company broadens the range of the public services provided through these offices." It is the purpose of this section to explore some of the ways in which the present services provided by Western Union field offices and people can be broadened in the years ahead, and to consider how the resulting added activities and associated revenues will help maintain and expand that network of public offices.

CONTINUANCE OF THE PRESENT FUNCTIONS OF WESTERN UNION'S PUBLIC OFFICES IN THE ORIGINATION AND TERMINATION OF TELEGRAPH MESSAGES, MONEY ORDER, GOVERNMENT, PRESS, INTERNATIONAL AND OTHER STANDARD SERVICES.

For more than twenty years (as duplicate offices resulting from the Western Union-Postal merger have been eliminated; offices born of wartime needs disbanded; offices in small communities converted to agency operation as message volume has drastically declined; branch offices in large cities consolidated with the help of extensive Deskfax installations, etc.), there has of course been a sharp and continuing attrition in the number of public telegraph offices, together with reductions in the hours of service at many offices. Nonetheless, and even were there not now either in being or in prospect any substantial alteration in the kinds of services provided, it would be impossible to forecast any future time at which the Company's public offices would disappear. That seems self-evident because no matter how many telephones are installed for use by the general public, or private wire and other systems put into service for business, press, government, etc., there will always be a substantial continuing need for the public telegraph services which Western Union alone provides.

In any event, what is now occurring and what is likely to happen in the future, promises to radically alter that pattern of long-term decline in public office representation by first arresting it and then, hopefully, by reversing that trend. These are the main outlines, as they can presently be foreseen, of the ways in which this reversal of trend is likely to come about.

THE INTRODUCTION OF NEW PUBLIC SERVICES.

a. Services Associated with Products.

In our present situation - and doubtless for some years to come, while we are transforming the basic nature of our business as described in the first section of this paper - services associated with the delivery of a product, like CandyGram, Cigargram, DollyGram, and perhaps others, can make an important and needed contribution to income, and help to bear part of the costs of maintaining our network of offices. However, over the longer term, this type of combination merchandise-message service has certain natural disadvantages from our standpoint, including the needs for special merchandising skills and for inventory and quality control, warehousing space, the amounts of money tied up in stock, dangers of pilferage and, especially delivery requirements.

As long as the Company offers these combination services, of course they should be merchandised to the maximum extent possible. Nor should the Company hesitate to broaden the line of such combination merchandise-message offerings, where reasonable prospect for success is present, so long as it is understood that these are essentially interim offerings not designed to fit into the Company's long-term permanent business planning.

b. Services Presently Under Experimentation,
with No Product Tie-In.

It is important that the Company continue to give closest possible attention to new service offerings now on a test basis, with the objective of expanding the scope of such services as soon as the tests have continued long enough to warrant extension. The Flowers-by-Western Union offering appears to be a promising service for expansion nationally, as soon as questions relating to profitability (arising from the percentage of such orders found to be uncollectible), are resolved. Another service that appears to offer particular promise, not only from the standpoint of added revenues, but also because of the promise it holds for adding to our telephone staffing, is the telephone answering business. Another quite natural service which should admirably fit into Western Union's office-service pattern is the acceptance of catalog orders, with the transmission of such orders over Telex and other communication facilities.

Western Union's entry into such fields as those just described provides certain important added public conveniences. This, together with the high standards of ethics the public quite properly associates with the use of the Western Union name, should be of great assistance in the introduction of such new services, and in the subsequent broadening of them regionally or nationally.

. THE MODERNIZATION PROGRAM.

The union of the Telex service with the public message business should be another important factor contributing to the possibility of maintaining, and (hopefully) ultimately expanding, the Company's public office representation. The larger number of Telex installations which are the heart of the program will undoubtedly require more switching centers; the corollary expansion of Tel(T)ex service should add importantly to the number of messages that will require handling at field offices; increasing availability of public Telex service for use by salesmen and others should be another substantial advantage, encouraging greater use of our public offices. Perhaps most important of all would be the hope that the substantial reductions in unit cost handling that would result from the eventual elimination of the reperforator system, in favor of the more economical Telex-Gentex types of handling, should make possible an alteration in the prior long-term trend of steadily escalating public telegraph rates.

4. A NEW CONCEPT OF WESTERN UNION OFFICES
AS A "DEPARTMENT STORE OF SERVICES."

An examination of Western Union's assets in respect of its extensive and unique field representation indicates rather clearly the kinds of added functions that can be performed in such offices. Basically, Western Union's situation is:

- a. It has a national name and reputation second to none.
- b. Despite the closures and office conversions thus far made, it still has offices, generally well located in city centers, in practically every city and town of consequence throughout the country.
- c. Its people are generally long-service people, skilled in the performance of all kinds of clerical functions, accustomed to the handling of large sums of cash, to dealing in strict confidence with messages of all kinds, and accustomed to dealing with the public.

- d. Western Union's managers, district managers, regional managers, etc., are quite generally important citizens in their communities, active in civic and community affairs, well and favorably known to businessmen generally.

With all these qualities, Western Union is ideally suited to provide a broad range of services in areas that may be either entirely new, or that may be filled presently by local, marginal operators, operating without the benefit of any national reputation. Among the kinds of services Western Union offices might perform are the following:

A general, broad extension of the catalog-ordering function to include the acceptance and transmission of orders for almost any and all kinds of merchandise.

Offering, through appropriate catalogs, of a general gift service whereby standard merchandise would be ordered through selected stores in cities throughout the country.

Travel agency and associated services.

The acceptance of want advertisements for newspapers in neighboring cities.

The operation of employment agencies, of course not including the executive talent search type of business.

Car rental agencies - of course representing a car rental firm only, with no association with the actual handling of automobiles.

A small loan business (and, conceivably, the financing of automobiles and appliances, and the acceptance at its offices of such recurring payments on a broad basis).

Possible offering of certain restricted types of insurance, like flight-travel insurance.

Of course, such a list as the foregoing could be expanded substantially. However, it does serve to illustrate the types of business that could be performed in our offices and by our people, with appropriate training. The general effect of such an expansion of services - and the general direction in which the future of these field offices lies - would be to transform them over the years into veritable department stores of services.

This, then, taken in conjunction with the first section of this paper, foreshadows the lines along which the new Western Union will develop. The Company is already furnishing services far beyond its original mission as a national telegraph system, and will henceforth develop along two broad, but mutually complementary lines. It will continue to develop its already large and unique skills in data- computer-oriented systems, where its capabilities are already at a point sufficient to constitute the base for building a national information utility; it will concurrently seek out and add extensively to the services provided by its national network of field offices (a unique interface of inestimable value with the public), to complete the transformation of these public offices from "telegraph offices" to "community service centers" offering a very broad range of customer services.