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RADIO READING SERVICES FOR THE BLIND
AND OTHERWISE PRINT-HANDICAPPED

AN INFORMATION PAPER

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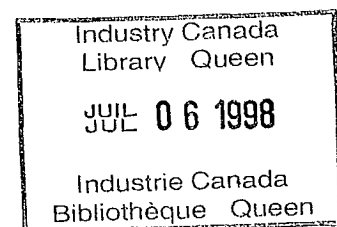
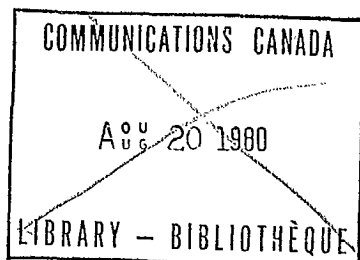


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1. INTRODUCTION

Radio reading services offer local radio programming which is intended for the reception of blind persons and all other individuals who are also "print-handicapped"; that is, persons who for whatever reason are unable to access print to obtain information in the normal fashion. Furthermore, this local programming is special in that it provides the print-handicapped with programming not available to them on commercial radio or television - programming such as the reading of newspapers, periodicals and best sellers, as well as other special features - thereby enabling these people to have independent access to up-to-the-minute information about daily life in their communities.

Radio reading services are sometimes confused with "radio talking book services". The distinction between the two types of services is made clear to the reader early in this paper; it is also seen that the two types of services are complementary to one another, and that the existence of one does not preclude the requirement for the other. The subject of this paper, however, is the former - that is, "radio reading services".

Two elements - local control and timeliness - characterize radio reading services. The establishment of each independent radio reading service, staffed largely by volunteers and supported (in the United States) by state or local funds, is a vital "grass-roots" development.

Most radio reading services are provided over the air on a special signal "piggy-backed" to the "main" channel of an FM radio station. By a technique known as "multiplexing", an FM radio station is able to simultaneously broadcast one program on its main channel and an entirely separate program on its "side band" (or "subcarrier"). In order for the listener to hear the programming of the subcarrier (e.g., a radio reading service), a special receiver or adapter to a standard FM radio receiver is required.

Most radio reading services typically lease (though a few use at no cost) a subcarrier frequency of an FM station, and they are able to provide specialized programming for the print-handicapped for as many hours as the station's main carrier frequency is on-air.

In the United States, in addition to the use of side bands, a smaller number of services are provided in an "open" format, or over the main channel of the FM station. Also a few cable systems allow a portion of their scheduled time to be used by a radio reading service, but this is usually limited to a few hours a day.

Also in the United States, in 1980, the National Public Radio (NPR) will begin to make program exchange services available to the 227 NPR main channel stations as well as to the 36 services not affiliated with an NPR station, via its multi-channel telecommunication system.

In all, at the present time, in the United States there are 108 stations providing a radio reading service for the print-handicapped. This growth has indeed been dramatic, considering that it was only 1969 when the first-ever such service went on the air in Minnesota. Services are now available to more than 41,000 listeners in 33 states. The potential audience has been estimated at more than three million people. By contrast, there exists only a single such service in Canada - "Radio Reading Service", in Oakville, Ontario, which has a listenership of 300 persons.

One important factor exists which creates an additional major problem for operators of radio reading services in Canada, with which operators of such services in the United States do not have to contend. This problem stems from the difference in the legal and regulatory status of subcarrier transmissions between the two countries.

In the United States, subcarrier transmissions are considered as private, point-to-point communications. In Canada, these same communications are considered as "broadcasting" under the Broadcasting Act and Radio Act, meaning that these transmissions are legally intended for the direct reception of the general public. The fact that FM subcarrier transmissions are considered as broadcasting in Canada is not "per se" a problem, but rather serious problems regarding copyright are presented to the operator of a Canadian radio reading service - in attempting to read various materials over the air - that are directly attributable to this broadcasting status.

Funding and copyright are by no means the only serious problems facing the existing service in Canada or inhibiting the establishment of new ones; there are a number of others as well, which are also identified and discussed in some detail in this paper.

What this paper essentially seeks to accomplish is to review the developments (history, current status and future prospects) of radio reading services in the United States, as contrasted with the Canadian scene, illustrating common factors and differences where applicable, in order to provide some understanding of the potential important social benefit of radio reading services for the print-handicapped in Canada and to offer a challenge to all who might wish to become involved in combatting the serious problems that threaten the very life of Canada's only existing radio reading service and inhibit the growth of new ones.

2. SUMMARY

This paper begins with a review of developments regarding radio reading services for the blind and otherwise "print-handicapped" in the United States, looking first at the history of these services. The "Radio Talking Book" program of the Library of Congress (which began in 1934 and to which the concept of radio reading services can be traced), is described briefly, and it is shown how radio reading services differ from "talking books" and why the two types of services should be considered as complementary. The establishment of the first-ever radio reading service which went on the air in Minnesota in 1969 is then described, followed by mention of the expansion of these services since that time. The role played by various key organizational players who fostered developments in the early days of radio reading services is also discussed; these organizations include the Corporation for Public Broadcasting, the National Public Radio, the American Foundation for the Blind and the Association of Radio Reading Services. A discussion of radio reading services vis-à-vis exemption from copyright is also provided in this section of the paper.

The current status of radio reading services in the United States is then explored, showing that these services are now heard by more than 41,000 listeners throughout 33 states, broadcast over 108 stations in 30 of the nation's 50 largest markets. Discussed also in this section are the size, affiliation and organization of services; eligibility and listener profile; staffing; 1978 services costs; funding sources; programming; listener feedback; "open" and "closed" channel services; and special FM receivers which are employed by listeners of "closed" channel services - which constitute the vast majority of all radio reading services.

Next, problems facing radio reading services in the United States today are discussed. It is mentioned here that funding is the major one, but there are also a number of others.

In the following sub-section, it is seen that the future prospects of radio reading services in the United States are generally very good. Additional planned services and networking of programming are described, as is the plan for a state-wide open channel FM service in Louisiana.

The paper then proceeds to review Canadian developments regarding radio reading services, beginning with the initial roles played by the Federal Department of Communications and the Canadian Radio-television and Telecommunications Commission, and the early interest in these services by the Canada National Institute for the Blind. Finally in this sub-section, the establishment of Canada's first (and to date, only) radio reading service in Oakville, Ontario - called simply "Radio Reading Service" - is described.

The current status of developments in Canada is then explored, which includes: that of Radio Reading Service in Oakville - coverage and listenership, management and staff, programming, budget and special radio FM receivers; and the ongoing interest of certain Federal Government departments and agencies, as well as mention of others not yet involved, but which perhaps ought to be.

The next sub-section of the paper deals with major problems confronting radio reading services in Canada, which are basically: funding; copyright problems related to the legal status of FM subcarrier transmissions in Canada (which have a different legal status than in the United States); a certain lack of co-operation; and an important attitudinal problem.

Future prospects of radio reading services in Canada are discussed in the following sub-section. Included here is an exploration of why the survival of Canada's only existing service and the viability of future ones is at best uncertain given the present climate within which they must operate. Also discussed are some potential alternative (or complementary) transmission means for delivering these reading services. Finally in this sub-section, potential interest by some other players in Canada is identified.

A final section is provided - a Bibliography section, to which any interested parties could profitably refer directly for more in-depth information on the topics and issues discussed in this paper.

For the readers' convenience, the "recommendations" section of this paper is presented immediately after this summary, rather than at the end of the text.

3. RECOMMENDATIONS - FOR SURVIVAL AND GROWTH OF SERVICES IN CANADA

The recommendations presented here should be considered as options, in the form of a "shopping list". The order in which they are presented does not reflect a priority of importance, nor should they be considered to be mutually exclusive, but rather complementary.

As this is an information paper only, it remains to be decided which of the recommendations below - if any - can be agreed upon as the best way(s) in which all interested parties (including the Department of Communications) may facilitate the development of radio reading services in Canada.

Recommendations for possible action are as follows:

1. Establish a working group involving representatives of various Federal departments and agencies, such as the Department of Communications, National Health and Welfare, Secretary of State, Corporate and Consumer Affairs, the Canadian Broadcasting Corporation, and the Canadian Radio-television and Telecommunications Commission - to examine the issues and to report to Ministers and agency heads. The possibility of funding should be specifically included in any such examination and report.
2. The Department of Communications should continue to support the concept of radio reading services and promote the future development, by sharing information with all interested parties and acting as a co-ordinator and focal point for information exchange.
3. The Department of Communications should provide, if requested by the Oakville Radio Reading Service (and others), full support in an attempt to secure an exemption from copyright under new legislation as it affects radio reading services generally, or - if such an exemption cannot be obtained - to seek arrangements for a central source where radio reading services could obtain blanket permission to use materials by paying an annual lump sum to be negotiated.
4. The Canadian Broadcasting Corporation should explore what role it might play in the development of radio reading services, generally, and also review its earlier offered commitment in principle to make their FM subcarriers available for the delivery of such services.
5. The cable industry should consider becoming involved in this area, taking into account certain unique or complementary advantages of cable as a transmission medium compared to off-air broadcasting for the delivery of radio reading services.
6. Agencies such as the Canadian National Institute for the Blind and the Blind Organization of Ontario for Self-help tactics - as well as others not here identified, but known to the print-handicapped community - should co-ordinate their interests and efforts in order to maximize their lobbying power with government and the private sector (particularly on matters of funding and copyright).

4. U.S. DEVELOPMENTS

4.1 History

4.1.1 Not the Same as "Talking Books"

The concept of a "radio reading service" is sometimes confused with that of another service for the blind known as "talking books". The confusion is worth identifying and explaining at the outset, as otherwise the uninitiated reader may think either that there is no real distinction between the two types of services, or that the existence of one precludes the need for the other within any given geographical area. In fact, the opposite is true. Radio reading services, while still somewhat related to and having derived from the talking book concept, are quite distinct from, as well as complementary, to my talking book program.

The confusion mentioned above resulted initially from the fact that "Radio Talking Book" was the name chosen for the first radio reading service, which went on the air, in Minnesota, in 1969. At that time, the name had a genuine value, for it related to the familiar Talking Book program of the Library of Congress which had meant so much to the blind and otherwise print-handicapped for more than a generation prior to 1969.

Throughout the remaining sections of this paper, it will be made quite clear what constitutes the essence of radio reading services, as these services are the main focus of the paper; however, it was felt useful and important to first discuss talking books, briefly, in order to place the evolution of radio reading services into a fuller historical content, as well as to ensure that the reader is not left with the impression that the two services are one and the same by different names.

4.1.2 Talking Book Program of the Library of Congress

The Talking Book program of the Library of Congress began shortly after an act was passed by the Congress in 1931 to provide books for blind adults. From that point on, rapid developments occurred in all aspects of the service. Some highlights of these developments include the appearance of the original recorded talking book in 1934, and subsequent production of material on magnetic tape and cassette; the extension in 1952 of eligibility to all blind persons, deleting the earlier restriction to blind adults only; the further extension in 1966 of eligibility beyond the blind, to include persons of all ages with any physical disability which prevents their use of regular print material; the growth from the originally designated number of 18 regional centres to 53 - with an additional 80 sub-regional (or local) libraries involved; an increase in funding from \$100,000 provided in 1931 by Congress to a figure of \$15,872,000 of Federal money in 1976, and a combined Federal, state and local government expenditure of \$22,000,000

in 1975; and a growth in program participation to the point where at least 478,000 persons are now served - with 428,000 of these persons borrowing materials in recorded formats, 30,000 borrowing large-type materials and 20,000 borrowing Braille materials.

4.1.3 Minnesota, 1969

In the mid 50's, Minnesota State Services for the Blind established a Communications Center. At the Center they soon realized that, while library services had been available for blind persons in Braille, and on talking books through the Library of Congress and regional libraries, there was little available to Minnesotans - other than one monthly Braille magazine - that dealt with local people and happenings.

Other cultural and societal changes, it was perceived by the Center, were affecting the blind and physically handicapped in their communications needs. For example, more and more blind persons were finding employment, more homemakers using rehabilitation services and fewer elderly persons living with their children. It was then becoming increasingly obvious that factors such as immediacy and localism, which were important if the blind were to be able to exploit emerging opportunities for acceptance and social intercourse, were not being well served by library techniques and materials - even though they had already been adopted as best as possible specially for the blind. Recorded materials could not substitute for the localism and immediacy that a newspaper or a magazine brings, nor could the libraries provide current best sellers while they were still fresh, as it takes months to select, transcribe and place books in regional libraries.

"Ham" radio at first seemed like an obvious answer to these growing concerns, but it was unclear as to in what form or on what frequencies. After considerable examination, it appeared to staff at the Center that subsidiary carriers of existing FM stations would provide an ideal medium.*

It was soon discovered that a number of people had simultaneously come to the same conclusions. In September 1967, Mr. William Kling, then Director of Broadcasting at St. John's University, Collegeville, Minnesota, wrote to the Center offering the use of a subsidiary channel on one of the University's FM stations to establish a reading system for blind persons.

After considerable further exploration, studies and the seeking of funding, the "Radio Talking Book" came to life on January 2, 1969. The St. John's University effort was transferred subsequently to a non-profit board with broad public representation - Minnesota Public Radio.

* An explanation and a description of the use of these FM subcarriers in general, and the relative merits and disadvantages of their use for providing radio reading services, is provided later in this paper.

4.1.4 Expansion Since 1969

Expansion of radio reading services since the first one established in Minnesota has been steady. A second service began operating also in 1969, one was established in 1970, two in 1971, one in 1972, seven in 1973, seven in 1974, six in 1975, nine in 1976, five in 1977, thirteen in 1978, and three up to the spring of 1979.

The majority of these services were established on FM subcarrier channels; these transmissions via FM subcarrier are known in the United States as Subsidiary Communications Authorization - or simply "SCA", as it is more commonly called and will be hereafter referred to in this paper. About two dozen radio reading services have been started up on main, open FM channels in the United States.

Today there are some 86 services (SCA and main channel combined) operating in the United States, provided over 108 stations. The reason for the greater number of stations than services is explained by the fact that in certain areas one service may be carried over several stations; for example, one state-wide service is operating in Minnesota on several stations.

Key organizational players have played an important catalytic role in the expansion of radio reading services. Among these players are the Corporation for Public Broadcasting, National Public Radio, the American Association for the Blind, and the Association of Radio Reading Services. Their respective roles are described below.

4.1.5 Corporation for Public Broadcasting (CPB) and National Public Radio (NPR)

The CPB, a private, non-profit corporation was established in 1967 to foster the growth and development of the nation's non-commercial radio and television stations. CPB does not directly produce radio programs. Instead, it makes unrestricted grants to stations to be used for purposes of their choosing, supports the activities of the NPR (outlined below), provides grants to create new stations and expand existing ones, and provides grants for research and development.

Among its research efforts to date was the preparation in 1978 of a "Radio Information Services for the Print-Handicapped" handbook. This handbook has been of immeasurable value to all persons involved in every aspect of radio reading services. It was designed primarily for public radio station managers to give them a basic grasp of the problems and potential of radio reading services for the print-handicapped. The handbook is to be updated in the near future; however, much of the material is still very much relevant despite the passage of time, for any one directly or indirectly interested in radio reading services.

The NPR, independent but Federally funded, is the national programming and interconnection service for public radio. NPR provides interconnected and recorded services of a nature and quality that would

be impossible to duplicate on a purely local basis. They have provided programming and bought programs from independent producers for radio reading services in the past. More on the NPR's current and future activities is presented later in this paper.

4.1.6 American Foundation for the Blind (AFB)

The AFB has played and continues to play a very vital role in the development and fostering of radio reading services. The AFB is a non-profit organization providing research, information referral and consultation services to agencies serving the blind and visually-impaired. It has a special program on radio reading services, and provides consultation services - for example, in preparing grant proposals to get on the air and for expansion.

Two major activities in the past of the AFB have been the sponsorship, beginning in 1975, of three national annual conferences of interested persons in radio reading services, and the preparation of a "1979 Directory of Radio Reading Services". The Directory presents data gathered from a mail questionnaire sent to all identifiable radio services and several planning sites in the spring of 1979. Among the many valuable items of information which the Directory contains is an appendix of "Who's Who in Radio Reading Services" in the United States. This identifies key contact sources for anyone interested in determining the "state-of-the-art" of radio reading services in the United States.

4.1.7 Association of Radio Reading Services (ARRS)

The ARRS was formed in the spring of 1977 at its first national conference (following the previous three sponsored by the AFB) in Bethesda, Maryland. The ARRS was established so that ideas could be exchanged and people could work together for common goals. To promote the growth of services throughout the country, to provide for the development and sharing of advancing technology, to provide a unified effort in pursuit of conducive legislation and public understanding, and to promote techniques for effective consumer involvement - these are some of the objectives of the ARRS.

4.1.8 Exemption from Copyright

Under copyright law, reading printed materials on the air normally requires approval of the publisher or author prior to broadcasting. Such permission is often granted, but the process of obtaining formal approval can be time consuming and this can detract from or even defeat one of the primary motivations for and benefits of reading printed materials over the air; namely, that the materials be current. Given these severe limitations on radio reading services over SCA, the expansion of these services between 1969 and 1978 was indeed dramatic.

A significant boost for the future prospects of radio reading services was provided by the exemption of such services under new copyright law which came into effect in the United States on January 1,

1978. The inclusion of the exemption was no mere accident. It represented a victory which had been achieved through more than 20 years of lobbying by the visually-handicapped before government.

The new copyright law declares as "fair use" (and, therefore, not an infringement of copyright), "performance of a non-dramatic literary work, by or in the course of a transmission specifically designed for and primarily directed to blind or other handicapped persons who are unable to read normal printed material as a result of their handicap... if the performance is made without any purpose of direct or indirect commercial advantage and its transmission is made through the facilities of: (i) a governmental body; or (ii) a non-commercial educational broadcast station..; or (iii) a radio subcarrier authorization.."

Apparently with those regulations in mind, the SCA receiver manufacturers, as a policy, will sell those receivers only to radio stations or radio reading services and will not sell them to individual listeners.

As is discussed in some detail later in this paper, the same happy situation vis-à-vis copyright in Canada does not exist - and this has been a major stumbling block to the successful evolution of such services to date, and is a serious threat to their present and future viability in this country.

4.2 Current Status

4.2.1 Geographical Distribution of Services

Radio reading services have been established in towns and cities of varying sizes. Significantly, 30% of the services are located in areas with populations of 50,000 or less. Metropolitan areas with 50,000 to 250,000 persons have 26% of the services and metropolitan areas with a populations of more than 250,000 account for 44% of the services. The larger cities seem to have more difficulty in getting on the air, possibly because of more complex politics and the relative unavailability of open channel stations on which radio reading services often begin.

Regionally, 33 states have services. According to the four U.S. Census Bureau geographical divisions, there were five states in the North East with radio reading services, 12 states in the South, eight states in the North Central region and eight states in the West. Radio reading services are now operating in 30 of the Nation's 50 largest markets. However, there are significant gaps in rural areas across the Country.

4.2.2 Size, Affiliation and Organization of Services

Most services start off small. A third start with fewer than 50 listeners during the first three months of going on the air, half have less than 100 listeners and three quarters have 150 or fewer listeners. By contrast, only a quarter now have less than 250 listeners, half of the services now have more than 450 listeners and about a quarter have more than 1,000 listeners. The average for SCA services is 935 current listeners.

Slightly less than one-third (21 services) have incorporated themselves as totally independent, private, non-profit organizations. These might still be affiliated with an agency for the blind - for example, through renting space from such an agency. Fifty-four percent have formal affiliations with colleges or universities. Other affiliations (with some duplication because of multiple affiliations) are: state agency for the blind (17%); public school (14%); private agency for the blind (12%); National Library Service regional library for the blind and physically handicapped (8%); public library (4%) and local community agency (4%). Formal affiliations with various other entities constitute 15% of the services.

Some 60% of the non-commercial, independent services operate in cities with populations of 250,000 or greater.

Sixty-five percent of radio reading services have formal organizations with boards of directors, and 54% have consumer advisory boards.

The majority of radio reading services (61%) operate on a National Public Radio (NPR) member station; 15% operate on commercial radio stations; 10% use non-NPR, non-commercial, educational stations; and 6% broadcast from "private, not-for-profit" stations. The remainder operate on radio stations falling in other classifications. Ninety-five percent operate on FM stations. Five percent broadcast on the open channel of an AM station.

4.2.3 Eligibility and Listener Profile

The majority of services (82%) use the eligibility criteria of the Library of Congress, National Library Service Talking Book and Braille Program to determine who may receive a subcarrier receiver. In some cases an agency, such as the State Commission for the Blind, is responsible for certification; in other cases, the individual's statement is accepted as sufficient.

Without question, radio reading services are being used much more frequently by persons with problems in seeing print than those with manual dexterity or endurance limitations. Nearly 90% of listeners are unable to read print primarily on account of visual impairments. But many of these persons, most of whom are above 65 years of age, have multiple reading impairments in addition to their visual limitations and compounding health and mobility problems as well.

4.2.4 Staffing

Most of the work of the services is performed by volunteers. Half of the stations use more than 50 volunteer readers and 50 volunteers in other capacities, 25% use more than 100 volunteer readers and 35% use less than 25 volunteers in reading.

Most of the services operate with very few paid full-time staff. For half of the services, the number of paid full-time staff is less than 1.6.* Twenty percent have no paid full-time staff, 29% have one paid full-time staff, 24% have 2 or 3 paid full-time staff and 27% have four or more full-time paid staff. Some services have a paid part-time engineering staff and other specialists; many radio reading services get on the air with paid part-time station managers. For half of the services, the number of paid part-time staff is 1.1. Thirty-five percent have no paid part-time staff, 26% have one paid part-time staff member and 29% have two or three paid part-time staff.

4.2.5 Costs (1978)

For four services that began operation in January 1977 or later and for which start-up costs were identified, the costs of getting on the air were \$6,000, \$10,000, \$14,000 and \$63,000.

In 1978 only four services had annual operating budgets (salaries, rent, supplies) equal to or greater than \$100,000. The maximum was \$160,000. Twenty-five percent spent less than \$15,000, 25% spent more than \$65,000, and most were in the range of \$40,000 - \$60,000.

Government support for operating expenses was received by about two-thirds of the radio reading services. Half of the collected public contributions went to pay daily running costs. Foundations provided funds for about a third, as did local service organizations.

Funds to purchase equipment is sometimes more easily obtained than for operating expenses because the support is more identifiable and more permanent. Nevertheless, many services are constrained in expanding their listening audience due to inadequate funds to purchase receivers. Costs for purchasing receivers in 1978 were less than \$20,000 for most services. Only a few spent more than \$25,000 and half spent less than \$8,000 - enough to buy 100 or 150 receivers. Government support to purchase receivers was obtained by about half of the services. Public contributions were received by approximately two-fifths. A third of the services obtained money for receivers from local service organizations and a quarter obtained foundation grants.

Costs for capital equipment other than receivers (among the services that bought such equipment in 1978) were largely under \$20,000. Half of the services spent less than \$10,000, although one service spent as much as \$75,000. Funds to plan and equip the facilities of radio reading services also come from many sources. Half of the services received government support; nearly a third obtained public contributions; and a fifth obtained foundation grants and funds from local service organizations.

* Many of the stations do not operate their own control rooms but use the services of the main channel; thus they gain the use of main channel staff without this fact's showing in the statistics.

4.2.6 Funding Sources

The level and sources of funding reflect the abilities of dedicated volunteer organizations to operate creatively with limited regular funding. Few services have a single source of support; rather most combine monies acquired from a variety of local, private and government agencies. In addition, many services obtain donations of materials from local merchants and organizations.

Only a small percentage of the radio reading services (7%) require listeners to pay a subscription fee (usually between \$15 and \$25), but most others suggest listener contributions. Contributions and subscriptions do not make much of a dent into costs, however. The services say that less than 3% of their operating expenses are covered by listener support.

Following is a partial list of funding sources:

Federal Government

Comprehensive Employment and Training Act (CETA); Corporation for Public Broadcasting; Library Services and Construction Act (LSCA) of the U.S.; Department of Education (formerly HEW); Public Telecommunications Facility Program of the U.S. Department of Commerce (formerly the Educational Broadcasting Facilities Program); Title XX funds of the Social Security Act; and Vocational Rehabilitation funds of the U.S. Department of Human Services (formerly HEW).

State or Regional Government

Title III funds from the Commission on Aging, Office for the Aging; Library Commissions or State Library Departments; Office for the Visually Handicapped, Commission for the Blind; and Rehabilitation Service Administration.

Local Government

County and local government, revenue sharing.

Community Resources

Church groups; colleges and universities; corporations; Delta Gamma; Jaycees; Junior League; Kiwanis Club; Lions Club; school boards; societies for the blind; United Way; women's club; Fonta; music benefits, marathons, disco dances; raffles; local philanthropies and foundations.

4.2.7 Programming

How long services are on the air each day is a function of resources available. Half the services are on for 63 hours or more per week; one quarter are on for less than 25 hours per week and one quarter are on for more than 100 hours per week. Ninety-seven percent of the programming is local. Program exchange or National programming amounts to less than 3% of air time.

Newspapers receive the most broadcast time. The median number of broadcast hours per week is 24 for newspapers, followed by 9 hours for books, 6 hours for magazines, 1.3 hours each for shopping ads, 1 hour for community service notices and 1 hour for activities of daily living. All other types of programming - drama, special events, walking tours of museums and historical sites, home management, entertainment, talk shows, interviews, rehabilitation information - average less than half an hour each per week.

Program schedules are both costly and time consuming to prepare. Perhaps that is why, although 77% of the services produce them, less than half (43%) do so as often as every month. Regular print, large-print and Braille schedules are available about equally often.

4.2.8 Listener Feedback

Almost all services (85%) obtain feedback from listeners by surveying them. More than 90 percent receive telephone calls from listeners to gauge their performance; 20 percent report receiving feedback from listener mail. Surprisingly, only 16% report obtaining listener feedback from consumer advisory boards.

And the services say that listeners tell them this is how the programming should be allocated - 95% say newspapers are most popular, followed by books (40%), magazines (30%), shopping (25%), talk shows (18%), and entertainment (10%).

4.2.9 Open and Closed Channel Services

In addition to the program heard by the general public, FM stations are capable of simultaneously transmitting other programs to selected persons who are authorized to use special equipment designed to receive them. Listeners are provided a Subsidiary Communications Authorization (SCA) receiver which is pre-tuned to the transmitter being used in their area. Most receivers resemble attractive table model radios. Many are also equipped with earphone jacks to permit private listening. Many listeners, with the addition of an automatic time and tape recorder, record programs for later enjoyment when they cannot be at home to tune in. Portable battery operated receivers are becoming available.

Some communities use an open channel approach to bring current and local information to the blind and handicapped. This means that a local radio station has set aside time each day or week for this purpose. These broadcasts can be picked up on any radio and do not require special equipment. Most open channel services can offer only from $\frac{1}{2}$ to 12 hours a week, since available time in greater amounts on the open airwaves is not available to such a highly specialized audience.

Open channel services exist usually in areas where, for some reason, it has not been possible to establish an SCA service. In some cases the open channel operates as a temporary measure until more comprehensive coverage over a closed channel system is initiated.

Although air time is restricted, an open channel service can reach everyone in a community, thereby helping the general public become more aware of the special needs and problems of the handicapped. It would be helpful if every community could have limited programming over the open airwaves to promote community awareness and SCA service with its in-depth and more extensive coverage.

4.2.10 FM Subsidiary Communications Authorization (SCA) Receivers

Ninety-two purchases of some 43,000 SCA receivers were reported during the recent AFB survey. McMartin and Norver share about 88% of the market for SCA receivers. Approximately three-quarters of the orders (accounting for about half of the units purchased) were for McMartin receivers. Of the McMartin units bought, nearly 14,000 receivers (33%) were McMartin TRE-5 and TRE-5B, and 7,000 (16%) were other McMartin models. Nearly 17,000 receivers (39%) were manufactured by Norver. The other 5,000 receivers (12%) were distributed among the remaining manufacturers (S-F, Marcom, Beta, Sarkes-Tarzian, and Johnson). Most services are buying receivers at prices of \$50-\$75 each, typically in lots of 100 receivers.

Receivers are an important element of cost to most services, especially at start-up. Some of the services have minimized their start-up costs by going on the air with open channel operations. Nearly one-third of the services own fewer than 200 receivers, but half own more than 500 receivers and a quarter own more than 1,250. About one-third of the services have receivers placed in communal living settings - nursing homes or hospitals - but very few seem to have wired systems to communicate radio reading services throughout the entire facility.

4.3 Problems

The reader will note that later in this paper, under the general heading of "Canadian Developments", a parallel section to this is labelled "Major Problems", whereas this section is labelled simply "Problems". This is not to imply that radio reading services in the United States are not experiencing any major problems - at least, as perceived from an American perspective. However, what the author wishes to convey here mainly is that by comparison to the problems experienced by radio reading services in Canada, the problems experienced by our American neighbours are minor indeed. This can be inferred from one single fact alone - that while in the United States there are some 86 services being currently provided on some 108 stations, to date there is only a single radio reading service in existence in Canada, and this 11 years after the first service went on the air in Minnesota!

Nevertheless, there are certain problems which - if not threatening the viability of radio reading services in the United States - are at least somewhat inhibiting their more rapid expansion.

According to the recent AFB survey, there is clear agreement on the major problems facing services. A lack or scarcity of funds was reported by 78% of the respondents as one of their three most serious problems. Sixty-five percent reported that inadequate money was the most serious problem.

Forty-five percent of the respondents reported lack of staff or difficulties in locating, training and retaining staff as one of their three most serious problems (lack of staff, of course, is related to lack of budget). One-third of the radio reading services reported technical difficulties - with "crosstalk" (hearing the programming of the main (FM) channel in the subsidiary channel, or vice-versa), receivers and equipment in the studio - as one of their top concerns; 22% said finding listeners was a major concern; 20% said finding adequate or enough program materials was a problem; 14% mentioned difficulties with their advisory boards, and 10% mentioned lack of space or lack of air time.

4.4 Future Prospects

4.4.1 Additional Planned Services and Networking

As of the spring of 1979, according to the AFB "1979 Directory of Radio Reading Services", 22 additional planned services (in 17 states) had been identified by the National Public Radio. A complete list of these is provided in the form of Appendix B to the Directory.

In 1980, the National Public Radio (NPR) will begin to make program exchange services available to the 227 NPR main channel stations as well as the 36 radio reading services not affiliated with an NPR station, via its multi-channel satellite telecommunication system.

4.4.2 Louisiana State-wide Open Channel Service

Also according to the American Foundation for the Blind, "Radio for the Blind and Print-Handicapped", an organization in Louisiana, is planning a state-wide, open channel FM radio reading service. A total of \$850,000 has reportedly been budgetted for this service.

Copyright may or may not be a serious problem for the service. It is understood that the station is planning on seeking any required copyright clearances. Certain magazines at present, such as Time and Newsweek, however, will not provide copyright clearances; nor will some National newspapers.

4.4.3 General Prognosis

The general prognosis can only be described as good. While networking appears to be the next stage of development for radio reading services, the services will probably always remain primarily local in nature, as localism is one of the two main elements (timeliness being the other) which sets these services apart from other more traditional services and programs for the print-handicapped. Through satellites, eventually an ideal mix of some National and regional programming combined with mostly local programming will provide basic access to print for the handicapped which the non-handicapped take for granted.

5. CANADIAN DEVELOPMENTS

5.1 History

5.1.1 Department of Communications (DOC) and Canadian Radio-television and Telecommunications Commission (CRTC)

The DOC's interest in radio reading services evolved from a broader concern in determining how best innovative programming services in general could be provided to potential audiences, recognizing the congestion in the radio frequency bands allocated to broadcasting. It was with that premise that the Department sponsored "A Study of the Potential Use of FM Subcarrier Transmission With Respect to the Maximum Utilization of the FM Broadcast Spectrum", which was carried out in 1975 by David Gillick, who at that time was a private consultant to the DOC and who subsequently joined the Broadcasting and Social Policy Branch of the Department.

What has thus far been referred to as SCA in the United States is known in Canada as SCMO - with this acronym denoting "Subsidiary Communication Multiplex Operations". A fundamental difference in the legal and regulatory status between SCMO in Canada and SCA in the United States should be noted. In the United States, SCA transmissions are not considered a form of broadcasting but as a form of private communication; whereas in Canada, SCMO transmissions are considered to be broadcasting under the Broadcasting Act and the Radio Act. This means that SCMO are radiocommunications in which the transmissions are intended for the direct reception by the general public.

Gillick found that 24 of 29 licensed broadcasters of SCMO were actually using their subcarrier; however, most users were using it to distribute "functional music" (i.e. "Muzak") on a point-to-point basis as part of a subscription programming service.

He concluded that such use did not appear to properly satisfy the "broadcasting" status which SCMO possessed (and still do today). He urged that these anomalies be corrected by the DOC and the Canadian Radio-television and Telecommunications Commission (CRTC). Among the services which Gillick identified that would satisfy the broadcasting status of SCMO was a potential radio reading service which was then being explored by the Canadian National Institute for the Blind in metropolitan Toronto.

Later, in 1976, considerable consultation on this matter took place between the CRTC and the DOC. Among the highlights of the results of these exchanges were: the DOC's decision to amend Broadcast Procedure 7, in order to clearly reflect the broadcasting status of SCMO and to establish a consistency in policies between those of the DOC and those of the CRTC; the CRTC's concurrence with the basic position put forward by the DOC; and urging by the Minister of Communications to the Chairman of the CRTC to both amend the FM regulations to incorporate

SCMO and to co-operate in the establishment of a favourable climate wherein a valuable social service such as a radio reading service could become a reality.

In addition to writing to the CRTC, the Minister of Communications wrote in 1977 to the Secretary of State, as the Minister responsible for the Canadian Broadcasting Corporation (CBC), concerning the CNIB's request for assistance in the establishment of Canada's first radio reading service. The Secretary of State responded, saying that the CBC was indeed favourable to becoming involved. DOC were now also working closely with the CNIB bilaterally.

Thus, at one point in 1977 things looked promising, indeed, as a consensus had been achieved among the DOC, the CRTC, the CBC and the CNIB that the establishment of a radio reading service was desirable and feasible. The momentum achieved, unfortunately, was soon to dissipate.

5.1.2 Canadian National Institute for the Blind (CNIB)

The initial driving force for the establishment of a radio reading service in Canada came from Mr. R.C. Purse, Managing Director of the CNIB. By 1976, Mr. Purse had already been monitoring and even been involved for several years in developments in radio reading services in the United States, and had enlisted and received support in principle for the concept from the CRTC, the CBC, the Canadian Association of Broadcasters, the DOC and individual radio stations. In a brief which he submitted to the CRTC in 1976 he acknowledged the considerable support which the CNIB was receiving but that all attempts to interest a licensed FM radio station in providing an FM subcarrier had failed.

The brief referred to above was submitted in support of an application from Shoreacres Broadcasting Company Limited in Toronto, who in 1976 were seeking an FM licence and who also - if a licence were obtained - were prepared to allow the use of the accompanying FM SCMO channel by the CNIB to provide a maiden radio reading service in Canada. For reasons quite unrelated to the radio reading service, the CRTC subsequently denied Shoreacre's application.

Later in 1976, staff of the DOC and the CNIB met with representatives of radio station CFGM-FM in Toronto to discuss apparent interest on the station's part to provide the CNIB with the use of its subcarrier. While CFGM-FM had received its licence, the matter of where its transmitter would be located had not yet been decided. Subsequently, CFGM-FM decided to share antenna facilities with other established stations located on the CN Tower in Toronto and because of provisions in its lease on the Tower, regretfully had to inform the CNIB that they were no longer able to consider granting the use of its subcarrier to the CNIB.

By 1977, still undaunted, the CNIB had on another front received a letter from the Executive Vice-President of the CBC saying that he was finally in a position to state that the CBC agreed in principle with the CNIB's request to use CBC's Toronto FM outlet.

Shortly thereafter, the CNIB lost interest in pursuing matters further with the CBC. Perceived potentially serious copyright problems (related to the "broadcasting" status of SCMO in Canada) were advanced by the CNIB as the reason for its new hesitancy to proceed. (These "problems" are elaborated upon in a broader context later in this paper.)

It has been reported that it may also have been felt by CNIB management that the start-up costs of a service would be more prohibitive than first contemplated.

5.1.3 Radio Reading Service (Oakville Public Library and CING-FM, Burlington)

Also by 1977, interest in providing a radio reading service from another quarter had surfaced very rapidly. The Oakville Public Library had enlisted the willingness of radio station CING-FM in Burlington, Ontario to apply to the CRTC for an amendment to its broadcasting licence to use their SCMO channel for the exclusive purpose of providing a radio reading service to the blind and otherwise print-handicapped. Despite an opposing intervention which was filed by Switzer Engineering Services Limited, on July 27, 1977, the CRTC (Decision CRTC 77-457) approved CING-FM's application.

On May 22, 1978, the Oakville Public Library began broadcasting (via special Bell Canada lines to the CING-FM transmitter in Burlington), and Canada's first - and, to date, only - radio reading service was born. The Oakville Library chose as the name for the service, simply, "Radio Reading Service".

About \$100,000 was required to set up the Service, the bulk of which went for broadcasting equipment, studio construction and receivers. These initial costs were covered by grants from Wintario, the South Central Regional Library System, and the Oakville Public Library, along with several foundations and corporations, and a multitude of private donations.

Since going on the air, Radio Reading Service has experienced two major problems - funding and copyright. These are discussed fully later in the paper, as they are still current and serious enough that they warrant special focus.

In this historical perspective of the Oakville service, however, two significant items of correspondence which were directed to Federal Government departments should be noted: one, a letter sent on December 29, 1977 to Corporate and Consumer Affairs, requesting that

exemptions from copyright law be extended to radio reading services for the print-handicapped; and second, a request in November, 1977 to the Department of National Health and Welfare, for funding - which was subsequently denied.

By September of 1979, it appeared as though Radio Reading Service was about to die after a very short life. The Ontario Ministry of Culture and Recreation announced on September 12, 1979 that it would provide a \$40,000, "one time only", grant and consider future support. The decision gave Radio Reading Service some much needed breathing space.

5.2 Current Status

5.2.1 Radio Reading Service (Oakville Public Library and CING-FM, Burlington)

5.2.1.1 Coverage and Listenership

CING-FM's SCMO signal can be received from Toronto to Niagara Falls and also in Kitchener, Waterloo. The majority of listeners reside in the Toronto and Hamilton areas. Within this area there are more than 15,000 Canadians who cannot access printed materials. A little known fact by the general public is that less than 10% of blind persons can read Braille.

Currently, there are 300 persons receiving the service, with more than 100 persons on a waiting list for receivers.

5.2.1.2 Management and Staff

The Executive Director of Radio Reading Service is Gordon Norman. He is assisted by a paid staff of four other persons - two co-ordinators, a technician and an assistant.

In addition to their responsibility for the station's operation, the staff's duties include the service and delivery of SCMO receivers and the conducting of training courses for volunteers. A staff member is on duty at all times during the broadcast day, which is 16 hours, seven days a week. Each staff member works a 40-hour week.

The bulk of the work, both on the air and off, is accomplished by a corps of over 150 dedicated volunteers, only a few of whom have professional broadcasting experience. Most are from the Oakville area, though some travel from Toronto and Hamilton on a regular basis.

Volunteers, in effect, operate the Service. They handle most of the on-air reading, operate the control room, and assist in the office duties of the station. They are on duty from 7:30 a.m.

until 11:30 p.m. seven days a week. Without their assistance this service would not be possible.

5.2.1.3 Programming

The programming consists of the reading of daily newspapers, current magazines and books. The bulk of the material is of Canadian origin and is not available to the print-handicapped through any other media. The selection of materials is based on user surveys. There is no duplication of other services of the print-handicapped such as the CNIB Talking Book Service.

A total of over 80 hours of programming is delivered each week.

5.2.1.4 Budget

In the seven month period between September 1, 1979 and March 31, 1980, the total operating budget was \$45,693, only \$23,750 of which was split among five paid staff. No capital expenses were budgetted for.

For the full fiscal year commencing April 1, 1980, a total operating budget of \$118,692 has been established, of which \$93,292 has been set aside for operating expenses and the remainder for capital expenditures - which will include \$19,000 for the purchase of 200 receivers.

5.2.1.5 Receivers

Special receivers which are required to hear the SCMO broadcast are loaned by Radio Reading Service to listeners without charge. They cost \$95 each, and presently 300 of these units are in service, with an additional 100 on order. Already, there are more than 100 persons on a waiting list for the additional units.

5.2.2 Interest of Federal Government Departments and Agencies

5.2.2.1 Department of Communications (DOC)

From a technical point of view, the Department has a direct interest in radio reading services, insofar as the radio spectrum is a scarce public resource, which the Department has direct responsibility to manage in the best interests of all Canadians. This responsibility includes ensuring that any new application would not cause real or potential interference to other licensed spectrum users because of technically inadequate equipment or procedures. Thus, if an existing licensed FM broadcaster wishes to use his SCMO for the provision of a radio reading service, he is required to apply to the DOC for an amendment to his technical construction and operating certificate. Obtaining this is normally not any problem, but simply a procedural requirement.

The Broadcasting and Social Policy Branch also remain most interested in promoting radio reading services as one very worthwhile use of SCMO, recognizing the proven value of such services in the United States, as well as in Canada - especially considering the enormous problems which Radio Reading Service in Oakville has faced and continues to face.

It is also hoped that this information paper will provide some useful background material to assist in ensuring the survival of Canada's only radio reading service to date, and in promoting the establishment of others in this Country.

5.2.2.2 Canadian Radio-television and Telecommunications Commission (CRTC)

The CRTC also is required to grant approval for an amendment to the licence of any FM broadcaster who wishes to commence programming via SCMO. Again, this is primarily a procedural matter, as the CRTC is on record as favouring such services as radio reading.

Furthermore, the Research Directorate of the CRTC has examined the issue in some depth, independently of the DOC, and has come to the same basic conclusions, strongly endorsing any and all efforts in the sphere of radio reading services. Jeet Hothi of the Research Directorate has prepared a report entitled "Telecommunications and the Handicapped - Part I", which includes a separate section dealing with radio reading services. Hothi's paper is referenced in the Bibliography section of this paper.

5.2.2.3 Others

At the present time, there does not appear to be much active interest by other departments or agencies of the Federal Government in the promotion or support of radio reading service developments.

In the "Recommendations" and "Future Prospects" (Canadian Developments) sections of this paper, the author points out a perceived role to be played by National Health and Welfare, Secretary of State, the Canadian Broadcasting Corporation, and Corporate and Consumer Affairs. There may perhaps be others which could also play a role, but these have been identified as having a clear one.

5.3 Major Problems

5.3.1 Funding

Funding is unquestionably the greatest problem for radio reading services generally. As mentioned earlier, even in the United States - where services are flourishing - funding is considered to be the number one problem. However, in the United States various levels of government

do provide financial support in addition to private funding received through various organizations and other sources; whereas in Canada, support from all quarters, including government, has been minimal.

A major cost component of radio reading services is SCMO receivers, which at \$95 each can only be purchased in relatively small quantities for placement with listeners.

As also mentioned earlier, the Oakville Radio Reading Service was rescued from apparent imminent demise only a few months ago by the Ontario Government, but there is no guarantee that the Ontario Government will provide future monies. At the Federal Government level, no funding has been provided by any department or agency to date.

Needless to say, while Canada's one and only operating service is hanging by such a slim thread, other potentially interested parties in Canada are understandably reluctant to attempt to establish a similar service to the Oakville one.

5.3.2 Copyright

Next to funding, according to Gordon Norman, copyright is the single greatest problem facing radio reading services in Canada.

As mentioned earlier, in the United States these services are specifically exempted under recently revised U.S. copyright law. However, no such exemptions are provided under Canadian law.

Furthermore, while Canadian copyright law is currently under review, radio reading services cannot be totally optimistic about obtaining such an exemption when the new legislation is brought in - primarily because of the "broadcasting" status which SCMO hold in Canada, as opposed to the "private communications" status which SCA holds under U.S. law. While in practice the services are equally restricted in either country to those persons who are print-handicapped, in the United States the copyright holder is technically afforded protection under the law against his work's being obtained without royalty payment by the non-handicapped public. Since SCA is private communications, any unauthorized persons (i.e. persons not meeting radio reading service eligibility criteria) making use of SCA transmissions can be prosecuted. In Canada, however, since SCMO are defined as broadcasting, there is no legal restriction in this Country as to who can listen to radio reading services on SCMO if he or she so chooses and obtains an SCMO receiver privately. The fact that in practice it is most unlikely that many people would want to listen to a broadcast of the same printed material which is readily (and perhaps more conveniently) available to them in a printed format does not seem to alleviate the fears of copyright holders that their works will not be unfairly exploited by the general public.

It might be pointed out again here, however, that a small number of services in the United States are in fact provided on open channels (i.e. they are "broadcasting"), but they are exempted under the new copyright legislation since they are either provided by a "governmental body" or a "non-commercial educational broadcast station". So the "broadcasting" status versus the "private communications" status rationale does not seem to have been the sole basis on which lobbyists in the United States were successful in achieving exemptions written into the recently revised U.S. law. It would, therefore, seem reasonable to assume that - despite the broadcasting status of SCMO in Canada - there may well be some hope of having radio reading services exempted from the new Canadian legislation when it is finally enacted - particularly if there is no commercial use involved in the broadcasts of radio reading services. Notwithstanding any possible future copyright changes in Canada, at the present time under the existing copyright law, radio reading services are required to obtain copyright clearance in advance of reading materials over the air. In some cases, this permission is readily granted by certain newspapers, and in these cases there is no real problem. In other cases, however, permission is difficult to obtain from certain newspapers, or else these newspapers require a set fee for the year - as Canadian Press does. At times, copyright holders have been known to ask utterly preposterous fees, despite the fact that they know a limited potential audience is involved.

It is not simply a matter of cost to the radio reading service in obtaining copyright clearance, it is also a matter of the mechanics and time involved in attempting to obtain required clearances that creates major problems. For example, reading the Toronto Globe and Mail alone may mean seeking copyright clearance from more than 30 different organizations, since the Globe and Mail does not hold the copyrights for all its material. Also, for example, because of the large number of authors in such publications as Atlantic Monthly, the Oakville Service has had to drop these magazines.

5.3.3 FM Subcarriers

While this is neither a technical paper nor is the author competent to discuss technical matters in great detail, some brief statement of various problems relating to SCMO is required to give the reader an appreciation of some problems which do confront a radio reading service if it provides (or is contemplating providing) such a service via SCMO rather than over an open channel.

First, simply trying to obtain the use of an FM subcarrier in Canada is often extremely difficult, as most stations appear to already have their SCMO channel in use (mostly for functional music, as mentioned previously).

Secondly, arguments exist among engineers regarding the significance and degree of real or potential technical problems arising from an FM station's use of its SCMO. One such problem, for example, is "crosstalk" (hearing the programming of the main channel in the SCMO channel, or vice versa); another such problem is reduced signal to noise ratio on the main channel; another yet is a slight reduction in the loudness of the main channel. Suffice it to say here that many stations in the United States have concluded on balance that any technical problems are either relatively minor or else are outweighed by the social benefits derived from a decision to utilize their subcarrier.

Thirdly, most SCMO receivers are "fixed-tuned", as opposed to "variable-tuned". This means that a listener's mobility is somewhat restricted. If he goes to another city he cannot take his receiver to that city and pick up another service off-air.

Fourthly, some persons feel that the very fact that SCMO is a restricted service, "de facto", ascribes a certain "second class" status to the print-handicapped by their having to listen to a private communication rather than being able to have their information needs met like most other people through regular AM or FM broadcast programs.

The above is not an exhaustive list of real or potential problems related to the use of SCMO for radio reading services; however, it does represent most if not all the major types.

5.3.4 Co-operation

In the United States, various organizations of and for the blind have been largely responsible for establishing and promoting radio reading services. The American Foundation for the Blind has always been and remains one of the driving forces behind these services.

In Canada, as has been described earlier, the CNIB for several years took great interest in the service as a concept and went to great lengths to establish Canada's first such service. However, the CNIB has not been actively involved in this area since 1977.

It is not the author's intent nor desire to suggest how such co-operation can or should be achieved. However, it should be obvious that what is critically required is a strong team approach by any and all organizations interested in the print-handicapped, in order to be as effective as possible in fund raising approaches - whether that be in terms of lobbying power, or obtaining donations from private as well as public organizations, corporations and individuals.

5.3.5 Attitude

The author can do no better than to quote Jeet Hothi here directly:

Most important of all inhibitory factors is perhaps the difference in the attitude of Canadians and Americans. While in the United States special services for the physically handicapped, such as radio reading services, are considered more as part of the fundamental and basic rights to which the physically handicapped are entitled, in Canada, there is a tendency to look upon these more as acts of charity rather than something which these people deserve and are entitled to. This is unfortunate.

5.4 Future Prospects

5.4.1 Survival and Viability Uncertain

Without wishing to be melodramatic, the author concludes that the survival of Canada's one and only service to date - Radio Reading Service in Oakville, Ontario - and the viability of any future such services in Canada (as referenced later in this section) are, at best, uncertain.

The problems outlined earlier are serious indeed. However, some recommendations are provided (immediately following the "Summary" section near the beginning of the paper) which may, if implemented, combat these problems and provide a more hospitable climate in which radio reading services may yet flourish in Canada.

5.4.2 Alternative Transmission Means

While this paper has thus far dealt with the delivery of radio reading services primarily within the context of FM subcarrier transmission, since this is the dominant means utilized in the United States and in Canada's only existing service, attention is drawn here to the fact that there are other means which could be profitably explored - particularly as they suit the Canadian telecommunications environment.

Canada is the most heavily cabled nation in the world. The penetration rate in most major cities in Canada (unlike in the United States) is sufficiently high as to provide one important and viable transmission means as an adjunct to off-air SCMO.

On a cable system there appear to be two methods which could be used to make a radio reading service available to an audience: a) the cable system could receive the FM signal which carries the SCMO transmission and distribute that particular SCMO channel in the cable FM band (in this instance the subscriber would require a decoder to extract the information); or b) the SCMO information received off-air could be decoded at the cable head-end and retransmitted on the cable FM service on a frequency which could be received on a standard FM receiver.

If copyright were not a problem and if the service were free of charge, then it would be logical to remodulate a carrier in the FM band at the cable head-end with the information extracted from the SCMO signal. In this case, the service would be available to everyone on cable without the need for a special decoding device.

Another potential means of providing a radio reading service in the future is via satellite. Two distinct advantages of this potential means is that it could provide delivery of a single reading service over a wider geographical area than is possible by FM transmission alone, and at the same time provide for the possibility of network programming.

5.4.3 Potential Interest by Others in Canada

It is simply not known by the author how much potential interest there may exist among others not yet identified in this country in radio reading services generally. However, there are at least three other interested parties or sources, in addition to those mentioned throughout this paper,* who are either monitoring activities or planning on starting up a service in the near future. They are:

Mr. Paul E. Thiele
Librarian and Head
Crane Library
1574 East Mall
University of British Columbia
Vancouver, B.C.
V6T 1W5
(Tel. 228-6111)

Mr. Robert Burns
Winnipeg Videon Incorporated
651 Stafford Street
Winnipeg, Manitoba
(Tel. 475-9170)

Mr. Oliver von Entress
La Magnétothèque
1030 Cherrier, Suite 105
Montreal, Quebec
H2L 1H9
(Tel. 524-6831)

Finally, it should be stated that one of the main reasons for writing this paper, apart from the sharing of information with those known persons or organizations in the field, is to generate interest among any and all others who might possibly wish to become involved in the promotion, support or establishment of a radio reading service in the future.

* The leading figure, Gordon Norman, Executive Director, Radio Reading Service (Oakville), may be contacted at 1274 Rebecca Street, Oakville, Ontario, L6L 1Z2, (416) 827-4455.

APPENDIX A

RADIO READING SERVICE

PROGRAMME GUIDE

WEEK 1

A.M.	MON.	TUES.	WED.	THURS.	FRI.	SAT.	SUN.		
7:45	TV GUIDE AND RADIO READING SERVICE SCHEDULE							7:45	
8:00	... THE TORONTO GLOBE AND MAIL ...						THE TORONTO SUN	8:00	
10:00	BOOK REVIEWS	AMATEUR-RADIO	MS. MAGAZINE	HOMEMAKERS MAGAZINE	THE NATIONAL ENQUIRER	THE FINANCIAL POST	THE HUMAN GAMUT	10:00	
11:00	... NON-FICTION BOOK ...					FORTUNE MAGAZINE	HARPERS MAGAZINE	10:30	
12:00	<p><u>WEEK ONE</u> OF A FOUR WEEK ROTATING SCHEDULE</p>					READ TO ME STORIES READ BY ALAN MAITLAND	CANADIAN FORUM MAGAZINE	11:30	
						1:00	THE SATURDAY SPECIAL	TIME MAGAZINE	12:30
						3:00	"OPEN COLLEGE" THE CANADIAN NOVEL	THE CHRISTIAN SCIENCE MONITOR	1:30
							SCIENCE DIGEST MAGAZINE	BOOST NEWS	2:30
P.M.	... CURRENT BESTSELLING NOVEL ...					THE HAMILTON SPECTATOR	THE SUNDAY NEW YORK TIMES	3:00	
4:00	THE FORTY-FIVE MINUTE MYSTERY PROGRAMME					THE COLLECTORS	CONSUMER NEWS	5:00	
5:00	... TV. GUIDE AND RADIO READING SERVICE SCHEDULE ...							5:30	
5:45	BRITISH MAGAZINES	NATIONAL GEOGRAPHIC MAGAZINE	MAGLEANS MAGAZINE	SPORTS MAGAZINES	TODAY MAGAZINE	TORONTO LIFE MAGAZINE	THE COLLECTORS	5:45	
6:00	... THE TORONTO DAILY STAR ...						LET'S LIVE MAGAZINE	6:00	
7:00	BOOK REVIEWS	"OPEN COLLEGE" THE CANADIAN NOVEL	THE NEW REPUBLIC MAGAZINE	ROLLING STONE MAGAZINE	SCIENCE FICTION MAGAZINES	THE NEW YORK TIMES MAGAZINE	T.B.A	7:00	
9:00	PEOPLE MAGAZINE	AMATEUR-RADIO	T.B.A	FANFARE MAGAZINE	CITY MAGAZINE	SHOWCASE MAGAZINE	NEWSWEEK MAGAZINE	9:00	
10:00	... NON-FICTION BOOK ...					PLAYBOY MAGAZINE	MYSTERY MAGAZINES	9:30	
10:30								10:30	
11:30								11:30	

RADIO READING SERVICE : NOW BROADCASTING OVER NINETY HOURS PER WEEK

RADIO READING SERVICE

PROGRAMME GUIDE

WEEK 2

AM	MON.	TUES.	WED.	THURS.	FRI.	SAT.	SUN.						
7:45	TV GUIDE AND RADIO READING SERVICE SCHEDULE							7:45					
8:00	... THE TORONTO GLOBE AND MAIL ...						THE TORONTO SUN	8:00					
10:00	BOOK REVIEWS	AMATEUR-RADIO	VOGUE MAGAZINE	WOMEN'S DAY MAGAZINE	THE NATIONAL ENQUIRER	THE FINANCIAL POST	THE HUMAN GAMUT	10:00					
		CONSUMER NEWS					ESQUIRE MAGAZINE	10:30					
11:00	... NON-FICTION BOOK ...					CANADIAN BUSINESS MAGAZINE	FUGUE MAGAZINE	11:30					
12:00	<p><u>WEEK TWO</u> OF A FOUR WEEK ROTATING SCHEDULE</p>					SATURDAY REVIEW MAGAZINE	TIME MAGAZINE	12:30					
										1:00	THE SATURDAY SPECIAL	THE CHRISTIAN SCIENCE MONITOR	1:30
												BOOST NEWS	2:30
											3:00	"OPEN COLLEGE" THE CANADIAN NOVEL	THE SUNDAY NEW YORK TIMES
P.M.	... CURRENT BESTSELLING NOVEL ...					OMNI MAGAZINE							
4:00	THE FORTY-FIVE MINUTE MYSTERY PROGRAMME					THE HAMILTON SPECTATOR	CONSUMER NEWS	5:00					
5:00							COOKING	5:30					
5:45	... TV. GUIDE AND RADIO READING SERVICE SCHEDULE ...							5:45					
6:00	BRITISH MAGAZINES	NATURE CANADA MAGAZINE	MAGLEANS MAGAZINE	SPORTS MAGAZINES	TO DAY MAGAZINE	HAMILTON MAGAZINE	EN ROUTE MAGAZINE	6:00					
7:00	... THE TORONTO DAILY STAR ...							7:00					
9:00	BOOK REVIEWS	"OPEN COLLEGE" THE CANADIAN NOVEL	THE NEW REPUBLIC MAGAZINE	AUDIO SCENE MAGAZINE	POPULAR MECHANICS MAGAZINE	THE NEW YORK TIMES MAGAZINE	HEALTH MAGAZINES	9:00					
							NEWSWEEK MAGAZINE	9:30					
10:00	PEOPLE MAGAZINE	AMATEUR-RADIO	T. B. A.	FANFARE MAGAZINE	CITY MAGAZINE	SHOWCASE MAGAZINE		10:30					
10:30	... NON-FICTION BOOK ...					PENTHOUSE MAGAZINE	MYSTERY MAGAZINES	11:30					

RADIO READING SERVICE : NOW BROADCASTING OVER NINETY HOURS PER WEEK

RADIO READING SERVICE

PROGRAMME GUIDE

WEEK 3

A.M.	MON.	TUES.	WED.	THURS.	FRI.	SAT.	SUN.		
7:45	TV GUIDE AND RADIO READING SERVICE SCHEDULE							7:45	
8:00	... THE TORONTO GLOBE AND MAIL ...						THE TORONTO SUN	8:00	
10:00	BOOK REVIEWS	AMATEUR-RADIO	COSMOPOLITAN MAGAZINE	GOURMET MAGAZINE	THE NATIONAL ENQUIRER	THE FINANCIAL POST	THE HUMAN GAMUT	10:00	
11:00	... NON-FICTION BOOK ...					FORTUNE MAGAZINE	HARPERS MAGAZINE	10:30	
12:00	<p><u>WEEK THREE</u> OF A FOUR WEEK ROTATING SCHEDULE</p>					READ TO ME STORIES READ BY ALAN MAITLAND	COMMENTARY MAGAZINE	11:30	
						1:00	THE SATURDAY SPECIAL	TIME MAGAZINE	12:30
						3:00	"OPEN COLLEGE" THE CANADIAN NOVEL	THE CHRISTIAN SCIENCE MONITOR	1:30
							SCIENTIFIC AMERICAN MAGAZINE	BOOST NEWS	2:30
PM	... CURRENT BESTSELLING NOVEL ...						THE SUNDAY NEW YORK TIMES	3:00	
4:00	THE FORTY-FIVE MINUTE MYSTERY PROGRAMME					THE HAMILTON SPECTATOR	CONSUMER NEWS	5:00	
5:00	... TV. GUIDE AND RADIO READING SERVICE SCHEDULE ...							5:45	
5:45	BRITISH MAGAZINES	CANADIAN GEOGRAPHIC JOURNAL	MACLEANS MAGAZINE	SPORTS MAGAZINES	TODAY MAGAZINE	TORONTO CALENDAR MAGAZINE	T.B.A.	6:00	
6:00	... THE TORONTO DAILY STAR ...						EARLY CANADIAN LIFE MAGAZINE	7:00	
7:00	BOOK REVIEWS	"OPEN COLLEGE" THE CANADIAN NOVEL	THE NEW REPUBLIC MAGAZINE	ROLLING STONE MAGAZINE	SCIENCE FICTION MAGAZINES	THE NEW YORK TIMES MAGAZINE	T.B.A.	9:00	
9:00	PEOPLE MAGAZINE	AMATEUR-RADIO	T.B.A.	FANFARE MAGAZINE	CITY MAGAZINE	SHOWCASE MAGAZINE	NEWSWEEK MAGAZINE	9:30	
10:00	... NON-FICTION BOOK ...					NATIONAL LAMPOON MAGAZINE	MYSTERY MAGAZINES	10:30	
10:30								11:30	

RADIO READING SERVICE : NOW BROADCASTING OVER NINETY HOURS PER WEEK

RADIO READING SERVICE

PROGRAMME GUIDE

WEEK 4

AM	MON.	TUES.	WED.	THURS.	FRI.	SAT.	SUN.	
7:45	TV GUIDE AND RADIO READING SERVICE SCHEDULE							7:45
8:00	... THE TORONTO GLOBE AND MAIL ...						THE TORONTO SUN	8:00
10:00	BOOK REVIEWS	AMATEUR RADIO	NEW WOMEN MAGAZINE	CANADIAN LIVING MAGAZINE	THE NATIONAL ENQUIRER	THE FINANCIAL POST	THE HUMAN GAMUT	10:00
11:00	... NON-FICTION BOOK ...					CANADIAN BUSINESS MAGAZINE	ESQUIRE MAGAZINE	10:30
12:00	<p><u>WEEK FOUR</u> OF A FOUR WEEK ROTATING SCHEDULE</p>					SATURDAY REVIEW MAGAZINE	T.B.A.	11:30
1:00						THE SATURDAY SPECIAL	TIME MAGAZINE	12:30
2:30						THE CHRISTIAN SCIENCE MONITOR	BOOST NEWS	1:30
3:00						"OPEN COLLEGE" THE CANADIAN NOVEL	THE SUNDAY NEW YORK TIMES	2:30
4:00	... CURRENT BESTSELLING NOVEL ...					POPULAR SCIENCE MAGAZINE	CONSUMER NEWS	3:00
5:00	THE FORTY-FIVE MINUTE MYSTERY PROGRAMME					THE HAMILTON SPECTATOR	THE COLLECTORS	5:00
5:45	... TV. GUIDE AND RADIO READING SERVICE SCHEDULE ...							5:45
6:00	BRITISH MAGAZINES	HARROWSMITH MAGAZINE	MACLEANS MAGAZINE	SPORTS MAGAZINES	TODAY MAGAZINE	NEW YORK MAGAZINE	KANATA MAGAZINE	6:00
7:00	... THE TORONTO DAILY STAR ...							7:00
9:00	BOOK REVIEWS	"OPEN COLLEGE" THE CANADIAN NOVEL	THE NEW REPUBLIC MAGAZINE	SOUND CANADA MAGAZINE	ROAD AND TRACK MAGAZINE	THE NEW YORK TIMES MAGAZINE	HEALTH MAGAZINES	9:00
10:00	PEOPLE MAGAZINE	AMATEUR RADIO	T.B.A.	FANFARE MAGAZINE	CITY MAGAZINE	SHOWCASE MAGAZINE	NEWSWEEK MAGAZINE	9:30
10:30	... NON-FICTION BOOK ...					PLAYGIRL MAGAZINE	MYSTERY MAGAZINES	10:30
11:30								11:30

RADIO READING SERVICE : NOW BROADCASTING OVER NINETY HOURS PER WEEK

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