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CONSULTANTS

D.O.C. STUDY

Re:

THE EFFECTS OF LICENSING ON INDUSTRY STRUCTURE

Part II

July 7th, 1978

OTTAWA CANADA

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P-7710

A STUDY INTO

THE EFFECTS OF LICENSING ON INDUSTRY STRUCTURES

FOR

THE DEPARTMENT OF COMMUNICATIONS

OTTAWA

PART II

Background Reviews

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Contract Serial N°: OST 77-00103
DSS File N°: 12ST.36100-7-0543

Ottawa, July 7th, 1978

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TRANSPORTATION

1.0 INTRODUCTION

Major changes have taken place in the transportation industry since World War II with significant effects on the cost and character of the services involved. The transforming agents have been the highway, air and pipeline carriers.

This new competition not only changed the nature of transport services, but also forced fundamental reassessments of public policy towards transportation. The pattern of industry development, and government regulatory policies generated to control it, have followed essentially similar patterns on both sides of the Canada/US border.

2.0 CANADIAN BACKGROUND

2.1 The National Transportation Act

Present Canadian transportation policies are governed by the provisions of the National Transportation Act of 1967. It was on all encompassing legislation designed to regulate the various modes of transport subject to federal jurisdiction; selected modes of communication were also included under the Act, however these have since been transferred to the CRTC.

The legislation enunciated the guiding principles of Canadian transportation policy, and created the CANADIAN TRANSPORT COMMISSION. This new agency was destined to regulate most transport modes within federal jurisdiction, and assumed the functions of the former Board of Transport Commissioners, the Air Transport Board, and the Canadian Maritime Commission.

2.2 DOT Organisation and Responsibilities

The Department of Transport is essentially responsible for the provision of transport support facilities and services, and for the safety aspects of transport carrier equipment and operations.

It is a corporate structure of Crown corporations and operating administrations which have varying degress of autonomy. It is composed of the

- Canadian Marine Transport Association
- Canadian Air Transportation Administration
- Canadian Surface Transportation Administration
- Artic Transportation Agency
- Transportation Development Agency.

2.3 CTC Organisation and Responsibilities

Section 14 of the National Transportation Act requires that the CTC should have as its objective: "the co-ordinating and harmonizing of the operations of all carriers engaged in transportation by the railways, aircraft, extra provincial motor vehicle transport, and commodity pipelines". The Commissions powers to regulate encompasses operating rights, rates, tariffs, finance, service, etc.

The regulatory and administratives work of the CTC is organized under committees, one for each of the following:

- air
- commodity pipeline
- international transport policy
- motor vehicle
- rail
- water
- review (vacant as of 1976)

The establishment of the CTC as both the sole transportation regulator and major transportation policy and research agency at the federal

level left the Department of Transport high and dry as an operationally - oriented agency (1). An attempt was made in 1970 to reorganize the Transport portfolio on ministry basis to restore the policy advisory initiative to the DOT staff, and to make the CTC responsive to the Cabinet, the Minister and his staff. However, the attempt was only partially successful because the Cabinet was not prepared to revise the National Transportation Act.

An important effect of the Act has been to cut off the Minister and the Ministry of Transport from the administration of regulatory policy thus making it difficult to insure that investment and regulatory policy remain complementary at the national level. There is also an informal communications gap in that the Ministry is inclined to look at policy issues in terms of wide social and political factors, while the CTC see the same issues in terms of the economic efficiency criteria set down under the National Transportation Act.

3.0 US BACKGROUND

3.1 General

In 1887 Congress recognized the need for regulation of railroads at the federal level by the passage of the Act to Regulate Commerce in 1887. This legislation became known as the "Interstate Commerce Act" and has since been the basis of federal control over domestic transportation in interstate commerce. With the exception of air transport, which is under the Civil Aeronautics Board, all domestic insterstate transport that is regulated by the federal government has been brought under the Interstate Commerce Commission by amendments to the original legislation. The Commission is responsible for the administration of the law; it is bi-partisan in composition and reports directly to Congress, thereby assuming independent status.

3.2 The Department of Transport

The Department of Transport was established in 1966 "to assume the coordinated, effective administration of the transportation programs of the Federal government, and to develop national transportation policies

and programs conducive to the provision of fast, safe, efficient and convenient transportation at the lowest cost consistent therewith". The DOT presently consists the Office of the Secretary of Transportation and seven operating administrations where heads report directly to the Secretary and who have highly decentralized authority. The departmental agencies are:

- Coast Guard Services
- Federal Aviation Administration
- Federal Highway Administration
- Federal Railroad Administration
- National Highway Safety Administration
- Urban Mass. Transport
- St Lawrence Seaway Development Corporation

3.3 The Interstate Commerce Commission

The ICC acts on all matters of national transportation importance which relate to surface operations. In broad terms, and within prescribed legal limits, the Commission's power to regulate encompasses economics and service; these responsibilities are broken down into three main areas:

1 - Operating rights
2 - Rates, tariffs and valuation
3 - Finance and service

Transport coming within the Commission's jurisdiction includes railroads, trucking companies, bus lines, freight forwarders, water carriers, commodity pipelines, transportation brokers, and express agencies. Oil pipelines have recently been transferred to the jurisdiction of the Dept of Energy.

3.4 The Civil Aeronautics Board

Positive regulation of air transport was undertaken at the federal level by the Civil Aeronautics Act of 1938 and the executive orders of

President Roosevelt in 1940. The pattern of regulation which was established was similar to that for railroads and motor carriers. In this instance however, administration was placed in the hands of a separate agency.

4.0 MOTOR CARRIER TRANSPORTATION

4.1 Motor Carrier Industry Overview - Canada

4.1.1 Industry Administration

Competition in the motor transport industry did not become significant until 1954; prior to this all intra and extra-provincial regulations were administered at the provincial level.

About this time, a privy council decision determined that the extra-provincial transportation of goods and services was a federal responsibility (2). The federal government was neither prepared for, nor interested, in assuming this type of jurisdiction; the result was the hasty passage of the Motor Vehicle Transport Act of 1954 in which the federal responsibility (but not their jurisdiction) was passed over to the provincial boards, thus making them agents of the federal government. The situation has remained static ever since; in 1967 the National Transportation Act was passed, Part 3 of which provided for direct regulation of extra provincial motor carriers by the federal government, however it was never implemented. At one point the trucking industry favoured federal intervention, but for a variety of reasons subsequently decided against it (3).

As the situation now stands, Motor carrier transportation is regulated at the provincial level for both intra- and extra-provincial undertakings. Provincial regulations used to administer intra-provincial transportation are also used in administering extra-provincial transportation on behalf of the federal government.

4.1.2 Industry Structure

Select committees recently examined trucking regulations in Alberta and Ontario. The Alberta committee concluded that there is adequate business in that province for all, hence that intra-provincial trucking

operations did not require regulation. However, it was felt that extra-provincial operations required regulation in order to control the activities of outside operators within the province. The Ontario committee ruled in favour of intra-provincial regulation because of the quasi-utility nature of the industry in providing service to smaller communities (3).

The Canadian Trucking Association feels that the absence of regulation would result in problems for the medium levels of the industry. Larger operators with well established terminals, distributing facilities, and communications networks stand to benefit most from de-regulation; service to unprofitable areas would be eliminated, and their more sophisticated organisations and facilities would tend to isolate them from uncontrolled competition. The medium level operator concentrates on building up the eventual resale value of his franchise; without regulation, his franchise would cease to exist (3).

The primary purposes of regulation in the motor carrier industry have been to:

1) permit sufficient vehicles to service the demands along various routes, at the same time maintaining the delicate balance between over capacity and healthy competition.

2) provide for the cross-subsidization of services along less profitable routes, and

3) ensure that rate s an tariffs are reasonable, and that no sector of the public suffers because of a monopoly situation.

Two basic motor carrier types exist in the transport industry: those which are for-hire, and those which are not. All operators functioning on their own behalf, and not primarily in the transport business, generally escape regulation. While certain classes of for-hire services are also deregulated, the policies in this regard vary between provinces, and with respect to the specific types of service provided.

The relatively low technology, low investment involvement upon entry, and the questionnable lack of return to scale of the motor carrier industry (7), permits small economically viable operating units. Thus there is a broad range of sizes and types of motor operations which are represented within the overall framework of the motor transport field: everything from the large professionally managed organisation which provides an extensive range of services in communities across the country, down to the owner-operator functioning with a single vehicle.

The environment in which the motor carrier industry functions is highly competitive in terms of service quality and market sharing. There is limited opportunity for price competition since rates must be filed with transport boards; hence they must be comparable to those of similar or competing operations if a transport service is to service.

Extra-provincial operators live with a great proliferation of regulations since they are accountable to every provincial jurisdiction through which they pass. Their major problems stem from the lack of reciprocal agreements between the provinces on such matters as vehicle licensing, gasoline taxes etc. While there is active co-operation between the provinces through the CCMTA (2) to ease the resulting difficulties, many still remain; only recently has there been an agreement which permits the use of a standard bill of lading, previously, each province had their own.

In spite of difficulties which the truck industry has had to face, extra-provincial operations have flourished; today they account for nearly half the revenue freight dollar for all modes. In Ontario for instance, there are now more for-hire trucks in every licensed class than ever before; this is a rare situation in a regulated industry which has reached maturity (3).

4.1.3 Entry

Applications involving entry into both intra and extra-provincial transportation activities are processed at the provincial level. The procedures in both instances are essentially the same, however the granting of extra-provincial rights by a provincial transport board is always made conditional upon similar approval being granted by the other provincial board/s concerned.

Entry control is primarily based on the interpretation provincial boards place on "public need and convenience"; however provincial regulations affecting various types of motor transport undertakings vary from province to province (2). Access to the industry varies from free entry, to regulated entry, to regulated entry with rate regulation. Alberta allows free entry to intra-provincial trucking operations, while five of the provinces regulate both entry and rates in one way or another; Ontario and the Maritimes regulate entry, but rates are only filed. In the field of extra-provincial operations, only Quebec attempts to regulate rates into and out of the province (3).

Typical of other entry variations brought about by policy differences between provincial administrations are the:

* types of commodities which a carrier may be licensed to carry.
* types of carriers which may or may not be subject to regulation
* vehicle technical requirements, safety standards etc. which must be met.

The licensing of highway carriers within the Province of Ontario involves the following sequence of events:

1 - application is completed specifying desired routes and nature of operations proposed

2 - application is submitted to the Ontario Highway Transport Board.

3 - the OHTB gazettes the application

4 - OHTB hearing is held at which the applicant must justify public need for the service; simultaneously others are given the opportunity to object to the proposed service.

5 - License is granted or denied, depending on the outcome of the hearing.

The foregoing procedures are essentially similar for most provinces; extra provincial applications are handled in the same manner, however board approval is subject to complementary authority being granted by the other province/s concerned. Present federal regulatory activity in the extra-provincial transport field is limited to the administration of the Lord's Day Act, and approval of sales, mergers, etc., as they relate to extra-provincial transport undertakings.

Professor Bonsor (7) stated that, based on the evidence provided by the executives of trucking companies, entry into the industry appears to be very difficult. From an economic perspective however, he points out that entry is relatively easy, requiring little capital investment; since entry is not blockaded, and since there is a high ratio of variable to fixed costs, above normal rates of return to existing carriers would tend to attract new entrants.

Professor Bonsor's remarks regarding the difficulty of entry appear to be inconsistent with recent indecations that the OHTB approves 80% of the applications for new franchies (2). If both observations are correct, then it is probable that many prospective applicants are discouraged before they reach the application stage (C).

4.1.4 Other Relevant Comments

Areas of Conflict:

Part 3 of the National Transportation Act of 1967 provides for federal regulation of extra-provincial highway carriers; however, this portion

of the Act has never been put into effect because of provincial opposition. Provincial objections hinge on the premise that their jurisdiction over highways should give them a significant degree of control over who should be permitted to use them (2). The threat of the federal government taking over extra-provincial motor carrier regulation and administration has resulted in the provinces getting together to resolve some of their regulatory differences which have hitherto complicated the licensing of extra-provincial carriers.

As evidenced by an address given by the Honourable E.J. Benson to the DOT Senior Management Training Course in December 1976, the issue with respect to implementation of Part 3 of the Act remains unresolved: he stated that "the responsibility of the Commission, with reference to Part 3, is simply to be in a position to carry out the wishes of the Government should a decision be made, at some future time, to implement this part of the Act".

CTC vs ICC Jurisdiction:

Federal jurisdiction in Canada extends over the entire transportation enterprise if any portion of it crosses provincial boundaries. In the US, ICC jurisdiction is limited to the actual vehicles and commerce which actually cross State boundaries.

4.2 MOTOR CARRIER INDUSTRY OVERVIEW - US

4.2.1 Industry Administration

The Interstate Commerce Commission was created by the Act to Regulate Commerce passed by Congress in 1887. At that time the ICC's main concern was with rail regulation, its objective being to remove discrimination, preference and prejudice in localities, services, rates, fares and charges. As the nation grew, new developments brought changes in the Interstate Commerce Act and the functions of the ICC, and in 1955 the Motor Carrier Act brought motor carriers of property and passengers under the Commission's jurisdiction.

Truck and bus companies require ICC approval to operate in interstate commerce as common or contract carriers. Private carriers require no appproval, nor do other carriers whose operations are confined within state boundaries; separate state agencies exist to regulate intra-state undertakings.

State agencies have jurisdiction over all vehicle licensing and technical standards associated with transports operating on state highways; in addition, local agencies control the commerce aspects of intra-state motor carrier undertakings. The ICC have exclusive jurisdiction of interstate commerce of motor carriers, including control over the types of commodities carried. It should be noted that ICC and DOT regulation applies only to the commerce and individual trucks which actually cross state boundaries; DOT regulates safety equipment, driver qualifications and hours of work.

4.2.2 Industry Structure (4)

The Interstate motor carrier industry is divided into three major motor carrier segments:

1- regulated
2- private
3- exempt

Department of Transport estimates place regulated carrier intercity truck movements at 40% of the total tonnage carried. Private carriers, comprising the private fleets of companies which are not primarily engaged in transportation and which do not offer this services for hire, account for another estimated 40%; while the remaining 20% is made up of for-hire carriers handing commodities which are exempt from I.C.C. regulation.

The federally regulated segment of trucking is further divided into contract and common carriers; the latter are again divided into regular and irregular carriers of general commodities and a variety of carriers handling special commodities. Regular-route carriers provide service between specific points over fixed routes, while irregular-route carriers serve general areas.

The distinction between carriers stems from the nature of the operating rights granted to each operator by the I.C.C. and is significant in terms of the nature of their respective operations. Carriers operating irregular route services generally minimize terminal (consolidation) operations and concentrate on truckload (TL) traffic; these are shipments which are large enough to fill a trailer, and are defined as shipments in excess of 10,000 pounds.

Regular route operators typically handle less-than-truckload (LTL) shipments. The assembly of LTL shipments into lots for economical inter-city movement is done at "terminal" facilities at fixed locations, and generally implies a pickup or delivery service for shipments of LTL size. The special commodity carriers (who are generally irregular-route operators) are primarily truckload carriers. The ICC also classifies regulated carriers by the magnitude of their annual revenues; this classification is primarily used to establish the reporting requirements of various sizes of companies under regulation.

Contract carriers are a special type of for-hire carrier, and are restricted to serving a limited number of specified suppliers under a well defined contractual arrangement approved by the I.C.C.

The regulated, regular route, common motor carrier of general commodities represents a major portion of the overall trucking activities in

the U.S. These carriers have created a market for what would appear to be a relatively high-cost form of inter-city freight transportation. One of the keys to the success of the industry has been a strategy that stressed service. This has taken the form of speed, reliability, and a willingness handle relatively small shipments.

4.2.3 Entry

Applications for intra-state transport operations are processed at the state level, while those proposing inter-state service are processed by the ICC. In general the trucking operations are regulated by the Interstate Commerce Commission and Department of Transportation when:

- traffic moves across State lines,
- traffic moves within a single State when transportation is part of an interstate or international movement, or
- traffic moves between the US and other countries.

ICC regulation does not apply in the case of transportation of

- certain specified agricultural commodities
- property wholly within a State
- property within a commercial zone or terminal area
- property moved by the owner in vehicles which he owns and controls.

The ICC governs the conditions for approving regulated interstate trucking operations through issuance of certificates of public convenience and necessity authorizing common carrier operations, or permits authorizing contract carrier operations. The showing of "need" is made by the testimony of shippers or users who support an application. Applicants must identify points to and from which the involved traffic will move; the volume of traffic involved; the specific commodities, and the transport service now in use by the shippers, if any. Applicants must also demonstrate that they

- have a specific and practical plan of operation
- can provide the necessary equipment
- can meet the specific needs of the shipping community.

Applicants for contract carrier authority must generally show that

- its vehicles will be assigned to the exclusive use of the limited number of shippers involved.

- its service will meet the specific needs of the shipper.

Carriers under I.C.C. jurisdiction must comply with certain regulations on matters of entry into the industry. Typically these include:

- routes/areas served
- commodities handled
- rates charged
- finance
- mergers and acquisitions

Common carriers are required to obtain certificates of public convenience and necessity to make certain services available to all shippers; contract carriers are required to obtain a permit to provide prescribed types of contract service to a small number of shippers.

I.C.C. certificates are granted upon demonstration of public need for the services, and that the applicant is fit, willing, and able to perform them. Such certificates are restricted as to territory, routes, services, and commodities to be carried.

It is generally considered difficult for new firms to enter, or for existing firms to extend operations, without merging or purchasing the existing rights of others comparies. However approximately 80% of applications are approved, which suggests some inconsistency between the perception and the reality of the situation.

Most rates of the regulated carriers are established through regional rate bureaus under ICC supervision. After hearings at which carriers and shippers may present arguments, the bureau files the tariff with the ICC where it is further examined. Individual carriers may take independent action outside the rate bureau, but most rates are filed through it.

The rates must be high enough to ensure cost compensation when based on ICC formulas, but not high enough to yield unreasonable profits. While an innefficient carrier is not assured of a profit, a very efficient carrier may realize more than adequate profit as a result of industry wide, rather than company by company, regulation.

The ICC has jurisdiction over mergers between carriers, and the commission has generally been receptive to most applications. This has resulted in a reduction in regulated motor carriers from approximately 21,000 after World War 2 to about 15,000 in 1969.

In general the process of obtaining an ICC authority is difficult, complex, and may involve substantial legal expenses which are beyond the resources of the small fleet operator. The small operator therefore has two legal options in pursuing business. He can either work entirely in the exempt commodities market, by contacting shippers directly, or, more usually, by dealing through a broker. He may also act as a contractor to a regulated carrier, thus enabling him to carry nonexempt commodities.

4.2.4 MOTOR CARRIERS - ENTRY CONTROL SUMMARY

A. REGULATORY INFLUENCES	INTER PROVINCIAL	INTER STATE	INTRA PROVINCIAL	INTRA STATE
a) DIRECT:	Agency: CTC	Agency: ICC	Agency: Prov.	Agency: State
1- Certification of Public Need: (Ownership, existence of market, effects on competition, etc)	Yes	Yes	Yes	Yes
2- Mergers, Acquisitions, etc	Yes	Yes	Yes	Yes
b) INDIRECT:				
1- Service Restrictions	Yes	Yes	Yes	Yes
2- Operating Rights	Yes	Yes	Yes	Yes
3- Financial Regulation	No	No	No	No
4- Rate & Tariff Control	Yes	Yes	Yes	Yes
5- Vehicle Licensing	Yes (Prov)	Yes (State)	Yes	Yes
6- Exit Control	Yes	Yes	Yes	Yes
B. NON-REGULATORY INFLUENCES				
1- Organized opposition by large carriers to new entrants	No	Yes	No	Probable
2- Local Administration of Nat'l operators complicates entry process & subsequent operations	Yes	No	N/A	N/A
3- Higher costs for small operators (eg insurance, etc)	Yes	Yes	Yes	Yes

COMMENTS: The highway transport industry is highly competitive particularly in terms of service competition. In both countries, entry to certificated routes and franchises is considered difficult in most areas and is generally realized by acquisition. However many commodities and types of services are exempt from formal certification, hence many opportunities for entrepreneurial activities exist.

5.0 AIR CARRIER TRANSPORTATION

5.1 Air Carrier Industry Overview - Canada

5.1.1 Industry Administration

The federal government exercises control over all aeronautical activity in Canada through the Air Transport Committee of the Canadian Transportation Commission, and the Ministry of Transport. Governing legislation is contained in the Aeronautics Act which prescribes that an applicant for a commercial air service must satisfy the Air Transport Committee that any proposed commercial air service is and will be required by the "present and future public convenience and necessity".

The Ministry of Transport supports the Air Transport Committee's activities by assuming responsibility for the monitoring of technical and operational aspects relating to existing and proposed new air services. Typically the Department of Transport will determine the operating capabilities of new applicants by examining proposed operational bases, aircraft and the circumstances under which they are to be used and maintained.

5.1.2 Industry Structure

By definition, a commercial service is any use of an aircraft for hire or reward; however certain forms of "commercial" use are exempt from commercial licensing, typically: search and rescue, forest fire suppression, certain types of leasing, etc.

Controls over air carrier entry to commercially licensable fields are greater than in the case of other transportation modes. The degree of

protection afforded commercial services is a function of the size and importance of the carriers involved. Typically Air Canada receives the greatest number of safeguards, followed by CP Air and then the regional carriers.

Below these levels, commercial air services are generally broken down into the following service classes:-

1- UNIT TOLL SERVICES: - charges are based on rate per passenger, or per pound of goods.

2- CHARTER SERVICES: - charges based on use of entire aircraft.

3- SPECIALTY SERVICES: - typically, flying training.

Although the air carrier industry is loosely referred to as comprising three carrier levels (nationals, regionals and all others), six levels actually exist for licensing purposes. National and regional carriers make up the first two levels, and flying clubs the sixth. All other carriers are distributed between levels 3, 4 and 5 according to gross annual revenues. (subsequent references to "third level" refer to the level 3, 4 and 5 operators as a group). Level 3 operations account for the bulk of the commercial licenses issued, the services provided varying from single passenger aircraft to large charter operations such as are provided by Wardair.

Generally speaking third level carriers are made up of very small operators who sometimes pioneer and develop routes, only to have them taken over by regional or national carriers at a later date. Although no "free entry" exists for these operators, only a limited degree of protection exists in most instances. Once a market develops to the point where it can be economically and more advantageously served by a regional, or national carrier, the CTC mandate to serve the public interest becomes a controlling factor. Other than operating in a limited market area, the small carrier's best protection is from the service limitations imposed by existing airport size and facilities within his operational area.

Domestic charter licensing has largely been the preserve of the smaller third level operators; typically they provide transport for groups travelling into the north country. Licensees are generally granted broad operating rights which permit them to fly from a given base to any point in Canada.

In the past, larger charter operations of the "ABC" type such as those organized by Wardair, the regional and national carriers, have been restricted to international routes; recent CTC policy changes now permit limited "ABC" charters on domestic routes. Previously, such domestic charters as have been authorized for some of the larger carriers have been restricted to the "affinity" type (involving charges based on the use of an entire aircraft, as opposed to unit toll charges based on rates per unit of traffic).

The degree of competition under which the national and regional carriers operate is limited. CPA is currently allowed 25% of the transcontinental capacity between Montreal and Vancouver; this is to be increased in 1978 and 1979. Insofar as this basic restriction permits, the two carriers are in direct competition in terms of service quality and market sharing.

Wherever consistent with local route development, regional operators are also permitted to provide indirect competition to national carriers between some national route points. Under such circumstances the national and regional carriers provide services over the same route segments but under different conditions (e.g. with intermediate stops) and with different equipment. In such situations, the major airline is the dominant carrier because of equipment advantage and/or licensing restrictions. Typically, Transair had a route between Winnipeg and Toronto which included a stop in Thunder Bay.

Local service carriers provide a limited degree of competition to the regional carriers. In addition to supplying flights between secondary and tertiary urban centres, and feeder services to the regional and mainline carriers, they also provide charter operations and are instrumental in the development of route services to remote areas. Local carriers occasionally provide indirect competition on regional route segments in the same way that regionals do on the national trunks. Direct competition can also result from local charter services; however, in some instances regional ownership of (or special arrangements with) local operators, restricts competition.

Air transport growth in mainline aviation, metropolitan charter and local route services has been related to the growth of the traffic market and the market penetration induced by the economies and capabilities of modern aircraft. The advent of the business aircraft has induced the growth of charter flying from metro areas. In the North air carrier growth has been related to resource development and defence construction, hence has shown a considerable degree of instability.

The primary role played by regulation has been that of ensuring the existence of a reliable, financially stable, regularly scheduled air network within the country. This has been accomplished by affording a maximum degree of route protection to the Level 1 and level 2 carriers which make up the backbone of this important aspect of the air carrier industry. Greater liberalization of present entry policies at these levels would be conditional upon the extent to which future growth in the industry might be able to support competition from additional operators.

For all practical purposes, level 2 operations are essentially regulated monopolies, while the level 1 carrier activities are a form of duopoly in which Air Canada has the advantage of maximum protection.

Level 3 operations are basically entrepreneurial and operate in a competitive atmosphere wherever more than one operator is licensed to provide the same type of service in a given area. Protection exists to the extent that the licensing process takes into account the potential

of the market concerned, but does not necessarily favour existing competitors where an entrant is able to satisfy the committee that additional services are needed, that he can serve them efficiently, and that they can be provided without threatening the survival of existing efficient air carrier operations.

5.1.3 Entry

Entry to either the national or regional route markets to provide competition to existing operators is not possible as long as existing protection policies exist. The acquisition of an existing operator is the only feasible means by which access to either of these markets might be realized.

Entry is most practicable at the third level of air carrier operations, however the limited protection afforded operators is a disincentive in situations where route development may eventually lead to take over.

Ease of third level entry is dependent on the amount of competition which may already exist in the area and the service class for which application is made.

A primary requirement in the case of new entrants is the need for certification by the CTC that the proposed service is required by the "present and future public convenience and necessity"; this involves commission consideration of the following:

1. the operational capability of the applicant.

2. the financial capability of the applicant in terms of initial financing plans, and the projected viability of the service.

3. the operation of the proposed commercial air service on a year round basis

4. the demand for the proposed commercial air service and the effect it may have on existing commercial air services

5. the degree of Canadian ownership of the applicant.

In the majority of instances, the most difficult certification requirement to satisfy is that of financial capability. Where competition exists, demonstrating the need for the proposed service may well prove to be the controlling factor.

5.2 Air Carrier Industry Overview - USA

5.2.1 Industry Administration

The Civil Aeronautics Board has broad authority to promote and regulate the civil air transport industry in the US, and between the US and foreign countries in the interest of foreign and domestic commerce of the USA, the postal service, and national defence.

Board decisions involving domestic operations are not subject to review or approval by the President or any department or agency of government; however federal state, or local agencies may participate in formal proceedings before the board as parties or intervenors. Grants of authority to operate between the USA and foreign countries require the approval of the President.

The Board issues regulations setting forth its policies, requirements and procedures of general applicability, and adopts orders effectuating its decisions in specific cases. If required by statute, or deemed to be in the public interest, public hearings are conducted.

Individual states have the right to exercise jurisdiction over intra-state air carrier operations as they relate to certification, route makeup etc. However most administrations are happy to be free of the responsibility, and only in California and Texas is there an extensive amount of activity in this area.

The Federal Aviation Commission is responsible for safety matters in both inter and intra state operations.

5.2.2 Industry Structure

Since America has the largest domestic air market of any country in the world, it has not experienced the same struggle which others have had in establishing and maintaining mainline carriers, and the associated networks of regularly scheduled routes which make up the backbone of any national system. The potential and extent of the US domestic market has permitted more effective use to be made of competition in the shaping of its industry. Government supported "national carriers" such as Air Canada do not exist in the US, their nearest equivalents would be the "Big Four", all of which are privately owned companies.

The elements making up the structure of the US carrier industry are however, similar to those which exist in Canada. In the US they are divided into the following carrier types:

- trunk
- local service
- supplemental (charter)
- cargo
- commuters
- air taxis
- indirect (freight fowarders, tour operators).

Trunk and local service carriers are the important operators which are responsible for maintaining the backbone of the regularly scheduled air network. Trunk line carriers are essentially equivalent in status to Air Canada and CPA, while the domestic local service carrier operations are similar in scope to those of Canada's "regionals".

The domestic local service carriers commenced as "feeders" between small communities and airline cities within their operational areas; however, as the trunk carriers reduced their medium stage routes, the locals picked them up and gradually expanded. Now the original "feeder" concept has gone, and locals which were formerly confined to one or two states are providing service to major cities; in effect they have become "regional" operators.

The original purpose of the "supplementals" was to relieve pressure on the high density domestic routes during seasonal peaks; however, with the advent of the jet, more seating has become available and the need

for this type of backup has reduced. The supplementals are largely engaged in charter work both domestically and in foreign countries. They are not certificated from the viewpoint of "public need and necessity"; rather they are authorized under a C.A.B. exemption process.

Air cargo carriers were first certificated in 1949. They were given the same rights as other certificated carriers but could not carry passengers. Although the potential for inter-city air freight has been good, this sector of the industry has not been strong. Some of the earlier operators have failed to survive, and most which have, did so on military contracts. Canada's WARDAIR would be the nearest equivalent to the US cargo and supplemental operations.

As local service carriers gradually expanded into larger communities, larger aircraft and longer stage route lengths, a new group called "commuter" carriers emerged. Commuters are not certificated, therefore they are not controlled as to the routes served, or the fares charged, however they are subject to FAA safety regulation; they are subject to two basic controls: prescribed liability insurance, and aircraft limited to a maximum of 30 passenger seats. In some instances, commuters provide substitute services over routes on which trunk or local service carrier operations have suspended services, however the major carrier is always held responsible if the commuter fails to provide adequate service. Operating in a wholly competitive atmosphere and essentially free of regulation, the commuter is the most dynamic sector of the US air carrier industry; Canada's local service carriers appear to be their nearest equivalent.

Air taxis are charter operators using aircraft limited to a take-off weight 12,500 pounds. They are not certificated, and are authorized under a CAB exemption process. Their function is essentially equivalent to that of the bulk of Canada's third level operators which also fly small equipment in a charter basis.

Indirect carriers are essentially agents engaged in the freight foward-ing or tour operating business. They are the "consolidators" or "middlemen" between the shipper and the airlines; in effect they are customers of the airlines. While this type of carrier operates no aircraft as such, he is in the air transport business, hence subject

to economic regulation (not certification) by the C.A.B. The indirect carrier's income is the difference between the charges imposed on his customers and the bulk shipping rates he pays the airlines.

C.A.B. domestic jurisdiction is primarily over interstate air carriers; individual States have the right to regulate intrastate air operations, however only a few do so. Intrastate operators provide service on low density routes between small and medium size communities and the larger airline cities within their operational regions; although not subject to CAB economic control, safety regulation comes within FAA jurisdiction. Intrastate operations provide services similar to those characteristic of the local service carriers in the early stages of their development; as a group, the intrastate operators have not developed very rapidly.

An important difference between US and Canadian air operations lies in the amount of competition which is evident in each. Since the potential of the Canadian market is limited, a very high degree of route protection has been necessary in order to ensure the continued viability of the regularly scheduled national and regional networks. When compared with the situation which exists in the US, the role played by competition in the Canadian market can only be described as "token in some areas".

US market potential is such that a comparatively large number of carriers can be supported on many domestic routes. Typically eleven operators provide service on the Washington-New York route, six between New Yorks and Chicago, etc. Although there is no open entry or price competition, there is keen service and market share competition; hence the industry operates in a highly competitive atmosphere. While competition of this type has resulted in good service, it is felt to be more expensive than necessary because the public is paying not only for the empty seats but also for the amenities; furthermore, it has resulted in a smaller selection in terms of price and quality options.

The Cannon-Kennedy Bill presently before the US Senate seeks to rectify this situation by preventing the CAB from setting prices and allocating routes, thus forcing the major airlines to compete in a more open type of market without price restrictions.

A high degree of competition exists at all levels of the US air carrier industry, however it is the non-certificated operators which enjoy a maximum degree of freedom from regulatory control. As non-certificated carriers, both the air taxis and commuters escape any form of control with respect to the routes they serve, fares charged, entry and exit.

It should be noted that the Canadian federal government exercises full control over all air activity within the country; no form of provincial authority exists. In the US, individual states have the right to exercise control over all aspects of intrastate air operations other than safety.

5.2.3 Entry

Entry at all levels down to and including cargo carriers is very difficult. Trans-Carribean and Northeast are the only two airlines which have managed entry as trunk carriers, while Air New England managed entry as a local service carrier only about three years ago.

The biggest debate now going on in terms of legislative proposals centers on the entry question. Present proposals include permitting existing licensed carriers to enter a limited number of routes (of their own choice) each year, and placing the burden of proof that new entrants would be "against the public interest" on existing operators.

Entry has been far too difficult, and the CAB has been critirized for this. Dr. Ead (8) in a review of the costs of airline regulation in

the US concludes that "the domestic air transport system would be vastly improved if CAB control over rates, entry, and exit were substantially curtailed, or eliminated".

The main elements of the certification process require a showing by the applicant that

- the operation will be controlled by US citizens
- a public need exists for the service
- the applicant is financially and otherwise capable of providing the service, and capable of financing its operation for a specified period without revenue.

Other less direct requirements include the need to

- file: rates, tariffs
- file for abandonment
- disclose stock ownership
- obtain CAB approval for:
    - mergers, consolidations, transfers
    - loans, financial air
    - pooling agreements
    - interlocking arrangements etc.

Entry into the trunk or local service carrier markets would appear to be practicable only through the acquisition of an existing carrier. Hence finance would be the most important consideration for new entrants in this area.

It is probable that the same conditions for entry would apply at the supplemental and cargo levels. While entry into these types of operations should be more readily accomplished than at the trunk, or local service levels, the impression received during this study has been that this sector of the air carrier industry has not been particularly viable. Hence, it is probable that opposition from existing operators to new entries would be strong and probably very effective.

Entry oppotunities are best at the non-certificated levels. Since no entry controls exist, the prime consideration would again be finance.

5.2.4 CERTIFICATED AIR CARRIERS - ENTRY CONTROL SUMMARY

A. REGULATORY INFLUENCES	INTER PROVINCIAL	INTER STATE	INTRA PROVINCIAL	INTRA STATE
a) DIRECT:	Agency: CTC	Agency: CAB	Agency: CTC	Agency: State
1- Certification of Public Need: (Ownersnip, technical & financial competence, existence of market, and effects on competition, etc)	Yes	Yes	Yes	Yes
2- Mergers, Acquisitions, etc	Y s	Yes	Yes	Probable
b) INDIRECT:				
1- Service Restrictions	Yes	Yes	Yes	Yes
2- Operating Rights	Yes	Yes	Yes	Yes
3- Financial Regulation	Yes	Yes	Yes	Probable
4- Rates & Tariff Control	Yes	Yes	Yes	Yes
5- Aircraft Tech. Requirements	Yes (DOT)	Yes (FAA)	Yes (DOT)	Yes (FAA)
6- Exit Control	Yes	Yes	Yes	Yes
B. NON-REGULATORY INFLUENCES				
1- Capital Requirements	Yes	Yes	Yes	Yes

COMMENTS: In both countries, entry to certificated regular route operations only practicable by acquisition, and generally difficult at lower certificated levels other than industry fringes. US commuter and air taxi operations are exempt from certification creating potential for dynamic entrepreneurial activities, particularly in the commuter field. No equivalent exemptions exist in Canada. As opposed to the Canadian situation, purely intra-state air carrier operations in the US are subject to state certification and regulatory control, however regulatory involvement varies from state to state.

6.0 PIPELINE TRANSPORTATION

6.1 Pipeline Transportation Overview - Canada

6.1.1 Industry Administration

Federal government control over pipeline transportation activities is limited to those situations where installations cross provincial boundaries. Intra-provincial pipeline operations are subject to the relevant laws and agencies within which they operate; although variations exist, requirements at the provincial level are essentially the same as those at the federal level.

Inter-provincial commodity pipelines come under CTC jurisdiction, their authority being derived from Part 2 of the National Transportation Act. Part 3 of the National Energy Board Act provides the NEB with regulatory authority over installations carrying liquid or gaseous hydrocarbons which are directly used as energy.

In the hypothetical situation where a line transports a mixture of liquid hydrocarbons and commodity products (typically oil and granular coal), the regulatory responsibilities would be shared by the CTC and NEB.

6.1.2 Industry Structure

From an economic point of view, the pipeline is capital intensive and not flexible to varying load conditions. It must be constructed to accomodate the maximum load that it will be required to carry during the course of its lifetime, hence all capital investment must be made at the time of installation. It is viable only in situations where high volumes can be brought on quickly and maintained.

A number of commodity type pipelines have been proposed in Canada, but none have come to fruition because the viability of such installations is dependent on higher volumes of movement than most mining operations in this country are capable of sustaining. The eventual potential for such facilities is considered to be for 40-50 mile lines from mine areas which do not have rail access because of muskeg or rough terrain.

At present therefore, pipeline activities in Canada are confined to the transportation of liquid and gaseous hydrocarbons.

From an investor's point of view, pipelines are considered high risk ventures, and because of the capital intensive nature of the investment, few are in a position to initiate such projects. Oil and railway companies are the largest potential investors, the former because they are already in the pipeline business, and the latter because it is sometimes the only way in which to maintain freight revenues.

Oil pipelines are frequently financed and operated by consortiums made up of the companies which use them; it can be advantageous from the viewpoint of oil producers to have some measure of control over transmission facilities, and to be in a position to use these as cost centers. By contrast, gas pipelines are more usually operated by commercial entities which are disassociated from both the production and distribution ends of the business.

(C): The capital intensive nature of the pipeline business itself, combined with the fact that, in Canada, certification of public need is a prerequisite before any such venture can be initiated, make these operations monopolistic entities once they have been established. It would therefore appear that any measure of competition in the business is evident primarily at the time when the successful applicant is being selected. Once pipeline rights have been granted and shippers are committed, there is little or no opportunity for further entry or competition along the route concerned until the capacity of the line proves inadequate.

A notable difference between Canadian and US pipeline administration policies lies in the fact that only U.S. gas pipeline installations are subject to entry control.

6.1.3 Entry

The requirement for a certificate of "public convenience and necessity" constitutes a major hurdle which successful pipeline applicants must overcome. The more important aspects of such certification include a showing of pipeline need, market existence, product availability, economic feasibility and the financial responsibility of the applicant.

Existing and well established pipeline corporations and other entities associated with the oil and gas business will find certification requirements easier to meet than would be the case with a new entrant; this would be particularly true if the new applicant has not previously been directly associated with other areas of the oil and gas business. There are several reasons for this:

1- it is unlikely that a new entrant could draw support from oil industry producers and distributors who are interested in operating the line on their own behalf.

2- assuming entry from outside the oil and gas industry, a new entrant would be dependent on the recruitment of the expertise necessary for management and operation of the line; thus his credibility as a pipeline operator would be more difficult to establish before a commission.

3- the capital intensive nature of the pipeline industry is in itself a deterrent to entrepreneurial operations, hence only those with substantial backing or reserves are in a position to consider such ventures. Thus, compared to the financial structure of competitive industry giants, that of the applicant may appear relatively weak.

4- in situations where the contested pipeline rights are of any significance, the new applicant would be hard pressed to counteract the impact of the lobbyists functioning on behalf of the larger well established pipeline operators, or oil company consortiums, which stand to lose the profits to be derived from transportation.

Although commodity pipelines are non-existent in Canada, entry would be conditioned in a manner similar to that which exists in the case of oil and gas. High capital investment requirements, coupled with probable competition from transport oriented entities such as the railways, would tend to deter independent entrants.

While no direct barriers exist to entry, entrepreneurial activities in pipeline projects of significance are limited to companies and consortiums with above average financial backing. Vested interests particularly in oil, generate competition and political pressures within the industry which would tend to discourage wider participation in larger pipeline transmission projects.

6.2 Pipeline Transportation Overview - USA

6.2.1 Industry Administration

US Federal Government jurisdiction over pipeline activities is limited to those situations where installations cross State boundaries; otherwise, control is exercised at the State level only.

The Federal Energy Regulatory Commission (an independent agency within the Department of Energy) exercises control over oil and natural gas pipelines, and the sale and resale of natural gas in interstate commerce. Regulation of oil pipelines is limited to rate supervision, while all phases of natural gas transmission systems are controlled from new construction through to transportation and final delivery. Rate regulation of oil pipelines is handled by the same FERC personnel as those responsible for natural gas pipeline rate setting.

The regulation of commodity type pipelines remains a function of the Interstate Commerce Commission. Pipeline saftey is the responsibility of the Department of Transport.

6.2.2 Industry Structure

A large number of oil and natural gas pipeline operations exist within the US. In the interstate natural gas industry alone there are approximately 120 companies or corporations which are subject to FERC jurisdiction. The Association of Oil Pipelines claims to represent some 94 oil transmission systems, 85% of which fall within the interstate category. Commodity pipeline activities subject to federal jurisdiction by the ICC are limited to a single coal slurry installation in the Mojave Desert.

Natural gas pipelines come under the Natural Gas Act, and although they are not utilities they are treated as such and are recognized as monopolies. For this reason gas transmission systems are heavily regulated. Some degree of competition exists along the eastern US seabord because of overlap in the gas pipeline services provided; hence situations do exist where distributors obtain their supplies from more than one pipeline operator, however such instances are exceptional.

Although franchised territories are not granted to gas pipeline companies as they are to distribution entities, it is difficult to justify public need for additional transmission facilities once a market is being serviced by an existing line. Thus the structure of the natural gas pipeline industry is essentially monopolistic, a situation which has been brought about by the recognition of its quasi-utility nature.

Interstate oil pipelines are administered under the Interstate Commerce Act. In contrast to their natural gas counterparts, they are not looked upon as quasi-utility operations, nor are they subject to exit and entry controls of any form; apart from the usual environmental and safety aspects of construction, regulation is limited to rate controls. There is significant competition from other transport modes, and situations have been known to exist where parallel systems have been built by competing pipeline operators to the detriment of existing installations.

Interests commodity pipeline activities are administered by the ICC; as in the case of oil, no entry controls exist and regulation is essentially limited to the requirement that rates and tariffs be filed with the commission.

The major administration policy difference between the two countries lies in the fact that US entry controls are only applied in the case of gas pipeline installations; once installed, such ventures become monopolies in the areas which they serve. By contrast, US oil pipelines exist in a competitive atmosphere, and are subject to potential competition from parallel and competing pipeline installations, as well as other transport modes; Canadian oil pipelines function as common carriers. US interstate commodity pipeline activities are too limited to be significant.

Other interactive factors and influences are essentially similar to those which exist in the Canadian industry. Typically, oil companies tend to co-operate in the construction and use of pipeline facilities in order to realize the cost advantages which accrue from equity in such ventures, hence the lines are frequently owned by those who use them. By contrast, natural gas pipelines are less generally operated by entities associated with the production and distribution aspects of the business.

6.2.3 Entry Controls

Entry to the gas pipeline industry is conditional upon obtaining a certificate of public need, usually in the face of heavy competition. Applicants must demonstrate the existence of a market and the resources necessary to supply that market, as well as the financial and technical competence to provide the necessary transmission facilities.

Although no entry controls exist in the oil pipeline industry, the entrant must finance the venture from high risk capital, in addition to meeting competition from other operators and other transport modes. The potential for success is further limited by the fact that oil companies prefer to form their own pipeline transmission companies.

All types of pipeline project are subject to regulations governing environmental, safety and other requirements related to construction, installation and subsequent operation. Over and above the entry problems created by competition, the capital intensive nature of the pipeline industry makes the availability of financing a controlling entry consideration.

6.3.1 NATURAL GAS PIPELINES - ENTRY CONTROL SUMMARY

A. REGULATORY INFLUENCES	INTER PROVINCIAL	INTER STATE	INTRA PROVINCIAL	INTRA STATE
a) DIRECT:	Agency: NEB	Agency: FERC	Agency: Prov.	Agency: State
1- Certification od Public Need: (Ownership, technical & financial competence, existence of market, resources to supply market, etc)	Yes	Yes	Yes	Yes
2- Mergers & Acquisitions, etc	Yes	Yes	Yes	Yes
b) INDIRECT:				
1- Operating Rights	Yes	Yes	Yes	Yes
2- Financial Regulation	Yes	Yes	Yes	Yes
3- Rates & Tariff Control	Yes	Yes	Yes	Yes
4- Installation/Tech./Safety controls	Yes	Yes	Yes	Yes
5- Environmental Controls	Yes	Yes (Misc. Agencies)	Yes	Yes
6- Exit Control	Yes	Yes	Yes	Yes
B. NON-REGULATORY INFLUENCES				
1- Capital Requirements	Yes	Yes	Yes	Yes

COMMENTS: Once operating rights are granted, gas pipelines become monopolistic entities within their service areas; hence they are closely regulated. Entry is made difficult both by the requirement for certification in the face of competition, and by the fact that the industry is highly capital intensive.

6.3.2 OIL PIPELINES - ENTRY CONTROL SUMMARY

A. REGULATORY INFLUENCES	INTER PROVINCIAL	INTER STATE	INTRA PROVINCIAL	INTRA STATE
a) DIRECT:	Agency: NEB	Agency: FERC	Agency: Prov.	Agency: State
1- Certification of Public Need: (Ownership, technical & financial competence, existence of market, resources to supply market, etc)	Yes	No	Yes	No
2- Mergers & Acquisitions	Yes	No		
b) INDIRECT:				
1- Operating Rights	Yes	No	Yes	No
2- Financial Regulation	Yes	No	Yes	No
Rate & Tariff Controls	Yes	Yes	Yes	Yes
4- Installation/Tech./Safety Controls	Yes	Yes	Yes	Yes
5- Environmental Controls	Yes	Yes (Misc. Agencies)	Yes	Yes
6- Exit Controls	Yes	No	Yes	No
B. NON-REGULATORY INFLUENCES				
1- Capital Requirements	Yes	Yes	Yes	Yes
2- Oil Consortium Competition	Yes	Yes	Yes	Yes
3- Political Influence of Major Oil Companies	Yes	Yes	Probable	Probable

COMMENTS: Canadian oil pipelines monopolistic within their service areas; US pipeline entry unregulated, hence except for rate regulation function in competitive environment. Entry is difficult because of capital intensive nature of the industry, and the competition offered by oil consortiums.

6.3.3 COMMODITY PIPELINES - ENTRY CONTROL SUMMARY

	INTER PROVINCIAL	INTER STATE
A. REGULATORY INFLUENCES		
a) DIRECT:	Agency: CTC	Agency: ICC
1- Certification of Public Need (Economic feasibility, financial responsibility of applicant, methods of financing, national participation, etc)	Yes	No
b) INDIRECT:		
1- Operating Rights	Yes	No
2- Financial Regulation	No	No
3- Rate & Tariff Filing	Yes	Yes
4- Safety Controls	Yes	Yes
5- Environmental Controls	Yes	Yes
B. NON-REGULATORY INFLUENCES		
1- Capital Requirements	Yes	Yes
2- High Risk - Capital Costs High	Yes	Yes
3- Viability Dependent on sustained High levels of throughput	Yes	Yes

COMMENTS: Commodity pipelines treated less restrictively in Canada than oil and gas lines. Canadian regulatory concern is primarily with safety and public interest aspect of new construction. US have no requirement for public interest certification, but require rates to be filed and safety and environmental regulations to be met. Finance is the major entry problem.

REFERENCES - TRANSPORTATION

(1) "Transportation Policy: Regulation, Competition and the Public Interest" Edited by K.M. Ruppenthal & W.T. Standbury. (1976)

(2) Contact T-7

(3) Contact T-5

(4) "The Owner-Operator Independent Trucker" by D. Wyckoff (1975). Publisher Lexington Books.

(5) "Organizational Formality and Performance in the Motor Carrier Industry" by D. Wyckoff. Publisher: Lexington Books.

(6) "Transportation: The Evolution of Canada's Networks" by John Schreiner (1972). Publisher: McGraw-Hill Ryerson/MacLean Hunter Ltd.

(7) "Transportation Rates and Economic Development in Northern Ontario" by N.C. Bonsor (1977). Published for the Ontario Economic Council by the University of Toronto Press.

(8) Reference T-6.4

(C) Consultant's observation or comment.

ENERGY

1.0 CANADIAN BACKGROUND

1.1 The Department of Energy Mines and Resources

The Department of Energy, Mines and Resources is responsible for encouraging the development and use of Canada's energy and mineral resources. To this end the Department develops national policies based on research and data collection in the earth and mineral scienses, and related social and economic analyses. It also provides scientific and technical information to the industry in the form of geological maps, atlases etc.

The energy policy sector of the Department is responsible for co-ordinating, promoting and recommending national policies and programs with respect to energy. Its mandate entails studies and appraisals of all aspects of energy resource development, production, processing and use.

The sector is made up of two operating components. One consists of the Resource Management and Conservation Branch which administers the federal interest in mineral resources off the east and west coasts. The other is responsible for energy policy functions and is made up of several branches having responsibilities relating to the oil, gas, coal, electrical, uranium and nuclear energy fields.

1.2 The National Energy Board

The National Energy Board was established in 1959 by the Energy Board Act. It is directly responsible for the regulation of specific areas of the oil, gas and electrical industries; it also acts as an adviser to the government in all matters relating to

the development and use of energy resources. The Board's power lies in its authority to regulate:

1) the construction and operation of interprovincial and international pipelines, and international power lines.

2) energy related import/export activities.

1.3 Provincial Energy Administration

Except for uranium, all aspects related to the development, production and consumption of energy resources within a province are administered and regulated by provincial agencies. Uranium comes under the Atomic Energy Control Act, hence federal control extends over every activity from exploration to export.

2.0 US BACKGROUND

2.1 The Department of Energy

At the US federal level, energy policies relative to oil, natural gas, coal, uranium, and exotics such as geothermal are determined by the several agencies within the Department of Energy. The Department is responsible for the development and implementation of national policies which will ensure that

a) the supply of energy available to the US will continue to be sufficient to meet the country's energy demand, and that

b) in the case of shortages, priority energy needs are met and that the burden is borne with equity across the nation.

2.2 Agencies and Functions

It is only recently that the Department of Energy was organized for the purpose of bringing fragmented areas relating to energy under a single administrative authority. The new department is made up of the former Federal Power Commission, Federal Energy Administration and the Energy Resource and Development Agency; it also includes former portions of the Bureau of Mines, and smaller pieces of other agencies which had to do with energy.

The Federal Energy Regulatory Commission (successor to the FPC) is now an independent agency within the Department which has general responsibility for gas transmission, pricing and production; it also assumed responsibility for oil pipelines which formerly fell within ICC jurisdiction. Within the Department of Energy, there is also a Department of Economic Administration which has policy responsibilities relative to the oil and gas industries; however, the FERC is considered the pre-eminent body in the oil and gas field.

The Department of Energy establishes policies relative to the level of energy production activity, while the Department of the Interior is responsible for carrying out these policies.

2.3 State Energy Administration

Natural gas produced and consumed within a State is subject to State regulation; only if the product is transported to another State is it subject to FERC regulation. In the case of oil however, federal regulation of prices commences at the well head.

3.0 ENERGY

3.1 Oil and Gas Industry Overview - Canada

3.1.1 Industry Administration

The Federal government administers and regulates all mineral rights in federally controlled areas. Thus the Department of Indian Affairs and Northern Development is responsible for rights in the Yukon, Northwest Territories and areas underlying Canada's high-Arctic off-shore regions. Similarly, the Department of Mines and Resources is responsible for administration and enforcement of regulatory legislation relating to resources off-shore from Canada's east and west coasts, the Hudson Bay, Hudson Strait, and certain federally administered regions within the provinces.

Resource rights on all Crown lands lying within provincial boundaries (federally administered lands excepted) come under the jurisdiction of the provincial governments.

The relevant federal and provincial agencies exercise authority over the oil and gas industries within their respective jurisdictional areas. This commences with the issuance of exploration permits, drilling reservations and leases, and continues with the issuance of well drilling licenses, regulation of production practices, pollution control, and other facets of the industry. Generally speaking, the overall pattern of regulation is similar in all areas, however details vary.

3.1.2 Industry Structure

The basic structure of the oil and natural gas industries can be broken down into three main components: production, transmission, and distribution.

The production component is made up of the large number of entities engaged in exploration, development, and the operation of producing wells. The raw material for this important and highly active phase of the industry is land. As long as prospective areas are available for leasing and exploration, the opportunity will exist for those with the necessary capital, geophysical and geological technology, to search for oil and gas resources. Literally hundreds of companies of various sizes are involved in exploration and development. As a result this is the most dynamic sector of the industry and one which functions in a highly competitive atmosphere, facts which are reflected in the offers made to provincial governments for petroleum land. (3)

The distribution of natural gas, in addition to requiring franchises approved by the provincial energy boards, involves significant capital investment for underground piping, metering, storage facilities etc. While the actual financial requirements are ultimately dependent on the number of consumers connected to any given system, it is not beyond the realm of possibility for the services within city the size of Ottawa to reach the order of 100 million dollars in investment value.(2)

Although the industry is treated as a monopoly and heavily regulated, it is subject to direct competition from both oil and electricity. In the past, competition from oil has been severe, in recent years however, this situation has been alleviated by the progressively increasing cost for crude and its various products. Natural gas now enjoys a 10-15% margin over this form of competition. Privately owned natural gas companies are however, subject to municipal taxes which tend to place them in a disadvantageous position when in competition with electrical utilities. (2)

Government policy is designed to ensure that the best use is made of available petroleum resources. This has been done by progressively increasing prices to encourage resource development, by

limiting the access of foreign oil to the Canadian market, and by adopting a generally benevolent attitude towards the industry. As a result, Canada has a relatively large oil industry which provides 75% of the nation's needs, and all Canadian needs for gas. However, the current tax system does tend to act as a barrier to entry, particularly in the oil and gas areas.

Generous provisions of the tax system such as write-off of exploration costs, depletion allowances etc. are very attractive to a company which has a resource income, but without that income, advantage can't be taken of making expenditures. The object is to encourage existing industries to go out and explore, but is of no help to a new operation. When the tax system is set up to encourage expenditure, it becomes more difficult for others entering the industry to compete. Only going businesses can avail themselves of the tax sheltering effect of spending new money, hence they are in a better position than others starting out. No industry other than oil and gas can make a full write off of capital expenditure plus the earned depletion on it as well. Entry is possible, but because of the tax set-up the barrier tends to be somewhat higher. (4)

3.1.3 Entry

Finance is the main barrier to entry in the oil and gas business. In both instances the distribution or "downstream" end is capital intensive, gas being further complicated by the need for a certificate of public need.

In the case of gas, entrants must either acquire an existing distribution operation, or obtain the right to serve new communities where the product is not presently being provided; in either situation the investment needs will be substantial. The downstream end of the oil business is even more capital intensive;

the need for refining, distributing and marketing facilities involves investments which few but the major oil concerns can provide. Even presuming that an entrant could find the necessary capital, his chances of success would be severely limited by his probable dependency on major producers for much of his crude supplies. Furthermore, his retail outlets would be competing in a market area which is highly competitive, and one in which there has been limited or no expansion in the past several years.

Entry opportunities at the production level are much better, it being the one area of the oil and gas industry where a great amount of entrepreneurial activity is going on. Prospective oil and gas lands are available, on a competitive basis, to any with the desire to explore and develop them; in Alberta recent lease prices for such properties have varied from $10 to $200 an acre. Off-shore lands have hitherto been available on a non-competitive basis at nominal cost, however recent legislative proposals will make access to such properties competitive also.

Small producer operations may be established by acquiring the exploration and development rights to prospective properties, locating oil or gas products thereon, and subsequently bringing them into production. Alternately, the rights to a producing discovery may be purchased. While a substantial investment may be involved in locating or acquiring a producing well, many small operators are able to find the necessary financing. Exploration and development of off-shore lands involve capital expenditures which are usually available only to consortiums of major oil producers.

The regulations covering the location and subsequent development of oil and gas wells are essentially the same in all jurisdictional areas; however, administrative details and requirements vary to some extent.

Exploration for oil and gas may be carried out either by obtaining an exploration permit, or in some provinces, by the purchase of a drilling reservation. In each case the holder has the exclusive right to take up leases within the area in which he is authorized to carry out his work. In the case of drilling reservations, leases may cover up to 50% of the reservation area; in the case of exploration permits, leases are generally limited to susbstantially less than 50%. Exploration permits may cover areas in the order of 200,000 acres or more, while drilling reservations are more frequently some 10,000 acres in size.

Permits and reservations may be disposed of either through application, or by competitive bid. The initial application fee is usually $250, and the terms of the grants vary from one year or less, up to a maximum of about six years.

With the discovery of oil or gas in commercial quantities, the permit or reservation holder may apply for a lease. Lease validity periods vary to some extent with the administration involved, however they are renewable as long as wells continue to produce.

3.2 Oil and Gas Industry Overview - US

3.2.1 Industry Administration

Administration and regulation of the natural gas industry is essentially the same as that in Canada. In both countries the production, transmission and distribution phases are fully regulated; the states have jurisdiction over "intra" operations, while federal jurisdiction is limited to those situations where the products cross boundaries.

Two essential differences between the administrative policies of the two countries are notable with respect to oil. Firstly, the US federal government controls prices at the well head, while in Canada, federal control of oil pricing applies only when the product crosses provincial boundaries. Secondly, Canada regulates oil pipelines in essentially the same meanner as natural gas lines; oil pipeline transmission escapes regulation in the US.

Prime responsibility for the administration of inter provincial and inter state activities of both the oil and gas industries falls within the jurisdiction of a single agency in each country: the National Energy Board in Canada, and the Federal Energy Regulatory Commission in the US.

3.2.2 Industry Structure

The structural characteristics of the US oil and gas industry, and the factors which have combined to bring them about, are essentially the same on both sides of the Canadian border. The basic divisions within the US industry, and their respective conditioning agents, are similar to those in Canada; hence, any

dissertation on US activities in this field is better dealt with in terms of their differences. Two major distinctions have emerged.

The first relates to the fact that mineral rights are largely privately owned in those areas where oil and gas have been traditionally discovered in the US. Unlike Canada and other countries, where large land tracts can be leased for exploration purposes, most of the deposits are located on small private holdings. Hence the leases have been for small acreages, thus making exploration and production an ideal situation for small operators.

According to the Independent Oil Association (5), about 90% of the exploratory wells in the US have been drilled by independents; and today there are about 10,000 independent producers which are made up of small and large companies which account for 70% of US crude oil production. The second significant difference relates to federal government policies with respect to the well head pricing of oil and natural gas.

Since federal regulation does not apply in the cas of intra-state gas sales, producers have preferred to sell their product in the more profitable intra-state markets. This had led to gas shortages in inter-state commerce, and has also had the effect of distorting the market by encouraging large industrials users to move into the gas producing states.

Federal regulation of oil prices at the well head applies equally to both intra and inter-state commerce. According to industry (5), the method of regulation is counter productive; wells discovered prior to 1973 are limited to a price of $5 a barrel, while those discovered subsequently can sell at $9. Stripper oil is

unregulated. Now Congress proposes to impose taxes on domestic crude which will equalize domestic and world prices. With rising drilling costs, the need to probe more deeply for new discoveries, and prices limited to levels which industry feels are unprofitable, the net effect of these policies has been to discourage exploration, particularly among the smaller operators (5).

Larger companies are in a stronger financial position to survive government regulatory programs, hence they are in a better position to manoever situations to their own long term advantage. The independents are highly vulnerable, and according to Engler (1) are highly dependent on the major oil companies at every stage. He points out that the industry giants share a community of interests which is guarded through a network of interlocking relationships; domestically they operate as a cartel. Typically, expensive continental shelf drillings are jointly undertaken, and oil pipelines are generally operated by consortiums made up of the larger concerns.

The oil industry is highly competitive, particularly from the viewpoint of the independent. The natural gas industry is recognized as a monopoly in the US, hence it is strictly regulated; however it is still subject to competition from oil and electricity as it is in Canada.

3.2.3 Entry

Entry barriers to the US oil and gas industry are similar to those which exist in Canada. However the American situation is conditioned by the fact that the market is larger, the stakes are higher, and a greater number of operators exist at all levels of the business; consequently the competition is more severe. Furthermore, a significant policy difference exists in that the US

government controls all oil and gas prices at the well head.

Current industry (5) feeling is that the present will head price ceilings are unrealistic in view of the ever rising costs of exploration. It claims that this factor has acted as a major deterrent to production and exploration, and is particularly detrimental to the small producer (5).

The primary barrier to entry, particularly in the downstream end of the oil and gas business, is finance. The competitive advantages enjoyed by the larger integrated companies also severely limit the opportunities for new comer entry, and his chances of success. As in Canada, the most dynamic area for entrepreneurial activity is at the production level. The fact that a large proportion of the mineral rights belong to private individuals in the regions where most of the producing fields exist, creates a ready made situation for small independent operations.

Although much of the present oil and gas development has been on freehold land, there are still a great many federal areas open for exploration and development, in many cases at nominal costs. Over-the-counter filing for exploration and leasing rights permits an applicant to obtain land (which has not previously been used, and which is not being put up for tender) on a non-competitive basis, while the "simultaneous" filing system is the lottery form of land disposal available at a cost of $10. For the most part however, the more prospective land leases are competitively tendered. Annual land rental in all cases is a dollar an acre.

Leases are issued by the Department of the Interior, and are renewable at the end of 10 years; holders are authorized to conduct their search for gas and oil within the area described in the lease agreement, and to perform such drilling operations as may be necessary to establish that oil and gas exist. Once the product has been located, and the operator is ready to commence production drilling, then administrative responsibility for the lease is transferred to Geological Survey.

Entry controls are summarized in para 4.0. Both countries place restrictions on nationals who may engage in exploration and subsequently obtain leases to producing properties. Canada requires exploration permits to be restricted to nationals, or to companies which are licensed to do business in Canada. At the leasing stage citizens must be the beneficial owners of the interests granted; companies must either be 50% Canadian owned, or have their shares listed on a recognised Canadian stock exchange. In the US, individuals must be citizens, and companies must be incorporated under US laws; aliens may have interests in American firms to which leases are granted for exploration and development purposes, however this is conditional upon similar rights being granted to US citizens in the foreign countries concerned.

In the US, a land lease is usually obtained before exploration is carried out for oil or gas. In Canada, either an exploration permit or a drilling reservation is obtained. Where a discovery has been made, or the exploration or drilling reservation permit has reached the end of its renewable life, then a lease may be applied for. The US situation differs to the extent that the lease exists from the outset, however once a potential source of oil or gas has been located a special permit is required from Geological Survey to commence production drilling.

Production, safety, reclamation, and environmental regulations apply in both countries at all administrative levels once the production stage has been reached.

The location of a product source is a pre-requisite to production activities; this involves either exploration for or the acquisition of a producing well. In either case, adequate financing will be the controlling factor. Competition for available prospective land will be a factor wherever exploration activity is involved, and infrastructure requirements will be of particular significance if the source is remote from existing transportation and other necessary facilities.

3.2.4 OIL & GAS - ENTRY CONTROL SUMMARY

	FEDERAL JURISDICTION		NON-FEDERAL JURISDICTION	
A. REGULATORY INFLUENCES	CANADA	USA	CANADA	USA
a) DIRECT (Exploration):				
1) Ownership	Yes	Yes	Yes	Yes
2) Exploration permits/or drilling reservations	Usual	Yes	Usual	-
3) Land Leases	-	Usual	-	Usual
b) DIRECT (Development/Production):				
1) Ownership	Yes	Yes	Yes	Yes
2) Lease Conversion	Usual	-	Yes	-
3) Production Permits	Yes	Yes	Yes	Probable
c) INDIRECT (Development/Production):				
1) Production Controls	Yes	Yes	Yes	Yes
2) Safety Controls	Yes	Yes	Yes	Yes
3) Environment Controls	Yes	Yes	Yes	Yes
4) Reclamation Requirements	Yes	Yes	Yes	Yes
5) Well Head Price Controls	No	Yes	No	Yes
B. NON REGULATORY INFLUENCES				
1) Incentives (Tax & pricing policies) 2) Financing 3) Land Competition 4) Infrastructure Needs 5) Environmental Costs, etc.	Yes	Yes	Yes	Yes

COMMENTS: Opportunity for entrepreneurial activity is good at exploration and production levels of the industry, but largely conditioned by government tax, price and import policies. US well head pricing policies discourage activities of smaller operators, while Canadian policies favor existing producers engaged in exploration rather than those engaged in exploration only. Industry operates in highly competitive atmosphere.

REFERENCES - ENERGY

(1) "The Brotherhood of Oil" by Robert Engler (1977). Published by University of Chicago Press.

(2) Contact E-10

(3) Contact E-3

(4) Contact E-1

(5) Contact E-7

(6) "The Control of Oil" (1976) by John Blair.
Published by: Vintage Books.

(c) Consultants Comments

MINING

1.0 CANADIAN BACKGROUND

1.1 Federal Administration

Federal rights over minerals include those in the Yukon. Northwest Territories off-shore underlying Canada's continental margins and some federally owned lands within the provinces.

The Department of Indian Affairs and Northern Development is responsible for administering mineral rights in the Yukon, Northwest Territories and those underlying Canada's high Arctic off-shore regions. The Department of Energy, Mines and Resources through the Resource Management and Conservation Branch administers and enforces legislation relating to mineral resources off-shore from Canada's east and west coasts, the Hudson Bay and Hudson Straight region, as well as federally owned resources within the provinces.

1.2 Provincial Administrations

In general, all known mineral lands lying within the boundaries of the provinces (other than those under federal jurisdiction) are administered by the respective provincial governments. Quebec is an exception where all mineral lands (except some granted prior to 1880) are administered by the province; mining rights on federal lands in Quebec are also administered by the province.

The laws and regulations now in effect and applicable to the disposition of mineral rights and other direct controls over mineral resources are those of the province in which the resources lie, with some minor exceptions. Except in Ontario, land grants

no longer automatically include the mining rights, hence in most instances these rights must be obtained separately by lease or by grant from provincial authorities administering mining legislation. In all provinces, however, some mineral rights are owned by individuals or firms on a free hold basis. Statutory requirements by which mineral rights can be acquired and maintained through terminable grants vary in details from province to province.

2.0 US BACKGROUND

2.1 Department of the Interior

The Department of the Interior is responsible for nationally owned public lands and resources. It assesses energy and mineral resources and works to assure that their development is in the public interest. The Department is divided into a number agencies, each with specific responsibilities. From the viewpoint of mineral administration, the Bureau of Mines, and Geological Survey are of greatest importance.

2.2 Bureau of Mines

The Bureau is primarily a research and fact finding agency. Its main objective is to encourage private industry to produce a substantial share of the Nation's mineral needs. The Bureau conducts research into mine health and safety, coal production technology, pollution control etc. It also collects, compiles, analyzes and publishes statistical and economic information on all phases of resource development.

2.3 Geological Survey

Geological Survey is responsible for the classification of public lands and examination of the geological structure, mineral resources and products of the national domain. The broad objectives of the agency are to:

1) perform surveys covering topography, geology, and the mineral and water resources of the US.

2) classify land as to mineral character, water and power resources.

3) enforce departmental regulations as they apply to oil, gas, and other mining leases, permits, licenses, development contracts, gas storage contracts, etc.

3.0 CANADIAN MINING INDUSTRY OVERVIEW

3.1 Industry Administration

Provincial administrations provide assistance in various forms for the purpose of encouraging exploration and mining development within their respective jurisdictional areas. Policies with regard to administration and regulation of the many facets associated with mineral production vary as to detail, but generally follow similar patterns within each jurisdictional area.

Regulatory activities generally commence with the issuance of exploration permits, and follow through with mining licenses or leases of various types which are valid for fixed periods of up to

twenty years. All safety and pollution aspects associated with removal of the minerals from the ground and their subsequent processing are carefully regulated; this includes such matters as well spacing, production rates, pro-rationing, etc in the case of oil and natural gas production. Royalty fees and taxes are imposed by the provinces, in addition to income tax by the federal government.

In most cases, provincial mining agencies in the individual provinces resemble miniature replicas of the Federal Department of Energy, Mines and Resources. They are largely engaged in publishing information, producing maps and reports on mineral occurrences within their jurisdictional areas, and acting in an advisory capacity to industry in matters relating to the various aspects of mining activity within their areas of interest.

In federally controlled areas, exploration, development and production activities are administered and regulated either by the Department of Energy, Mines and Resources, or the Department of Indian and Northern Affairs.

3.2 Industry Structure

Canada leads the world in mineral exports and ranks third in mineral production behind the United States and Soviet Union. The industry has always been a major factor in Canada's economic development and is still the main force in the northward advance of Canada's frontiers (5).

The industry operates some 300 mines, 241 mills, 16 smelters and 15 refineries. Activities extend to more than 130 mining principal mining areas from coast to coast; together with its allied exploration, processing, smelting and refining the industry provides over 141,000 direct jobs, and in 1974 was estimated to account directly and indirectly for 9.3% of the labour force (6).

Land tenure security has been a key element in Canadian mineral policy; without this, the basic requirement for ownership would be affected, thus reducing the value of the property and making financing more difficult to obtain.

Resource development in Canada has been stimulated by certain provisions of the federal and provincial tax codes that were advantageous to mineral development. A three year tax free period for new mines, tax exemption for capital gains, and immediate write-off of exploration and development expenditures were offered as incentives to mineral producers prior to 1972.

The industry has been given comprehensive technical support in the form of maps, survey and research data, material analysis and advisory services at both the federal and provincial government levels. Indirect financial assistance has been provided in the form of government investment in infrastructure requirements, typically for roads, railways,air strips, power generating plants, docks, harbours, etc. Bounties have been used to encourage a greater degree of ore processing in Canada; and tariff protection has been employed on a moderate scale to encourage secondary industry.

In 1971, however, federal mining tax laws were modified, removing the most significant tax advantages to which the industry had grown accustomed. Changes included removal of the three year tax exemption period; and the substitution of an earned depletion allowance based on eligible exploration and capital expenditures in place of the former automatic depletion allowance. In 1974, provincial governments moved to increase mining taxes through provincial corporate taxes and mining duties. As provincial charges against the mining industry were deductible for purposes of calculating the federal taxes at that time, this reduced the federal tax base, and Ottawa was forced to remove the deductibility provision.

These changes, coupled with depressed metal market conditions, produced a greater burden on mining companies than had been anticipated. As a result, amendments were made to the provincial tax laws in 1974 and 1975 to decrease part of the tax load for firms engaging in exploration and capital expenditures. It was an attempt to encourage investment by decreasing the uncertainty with which companies were viewing the future of the taxation system. (2).

In the mining industry the operators are dealing with venture capital. In most other industries there are significant assets to show where capital has been spent, however if ore is not located most of the money invested is lost. For this reason, money is harder and more expensive to obtain. The reason the country has such a good mining base is the fact that in the past, the taxation structure has looked upon mining as a high risk industry. The dual taxation scheme presently in effect is considered by many in the industry to be the largest single factor in discouraging its further development an expansion. (8)

Mining is by nature high risk, cyclical and capital intensive. The Canadian Mining Association (6) estimates that the establishment of a new mine in today's dollars can run anywhere from $100 to $500 million depending on location, size and grade of ore. Lead times are substantial and several years may be required before a mine becomes a producing entity. Moreover, the mine may well come on stream when international prices are low. It is therefore important that the industry be able to operate in a stable climate, conducive to long term planning.

3.3 Entry

Marsden (10) quotes some interesting figures relative to mineral exploration and development. The Ecstall mine of Texas Gulf Sulphur in Ontario discovered the occurrence of ore after four years work and an expenditure of $3 million, however it wasn't until 66 holes had been drilled that an intercept of high grade ore was hit; the total cost to start up time (1966) was $85 million. The Henderson mineral body in Colorado was found in 1965. Up until 1973, $127 million had been spent on development; this was expected to reach $300 million by 1977 when production was scheduled to begin.

Since land is available for the exploration and development of most resources, financing constitutes the major barrier to entry. Exploration activities are more readily accessed than production, the latter being particularly capital intensive. The costs involved in this area are dependent on the nature and depth of the ore bodies, and the methods used to locate them; larger companies seeking the more elusive deposits employ teams of specialists, sophisticated equipment, drilling rigs etc.

At the opposite end of the scale, the individual prospector still functions using surface methods, a large number today being engaged in the search for uranium using relatively simple and inexpensive equipment. Smaller companies and individuals engaged in exploration usually seek to establish the location of promising deposits, selling their claims to larger operations which have the equipment and finances necessary to prove out their potential.

Entry at the production level requires substantial capital. While both large and small producers exist, the "small" operators must still have access to the investment needs associated with developing an ore body into a producing entity. Lacking the reserves

built up over the years by their larger counterparts, small operators are subject to higher financing costs; furthermore, recent tax policy changes have reduced mining income making it even more difficult for small producers.

Laws governing prospecting and development vary to some extent with the jurisdictional area concerned. Under federal mining regulations covering general mineral deposits:

- prospectors must be licensed

- staked claims must be converted to leases or relinquished within 10 years.

- prospecting licenses may be issued to individuals over 18, or companies licensed to do business in Canada.

- leases are only granted to Canadian citizens who will be beneficial owners of the rights acquired.

- leases are only granted to companies incorporated to do business in Canada, either whose shares are 50% Canadian owned or whose shares are listed on a recognized Canadian stock exchange.

Within the provinces, regulations governing the rights of the individual to prospect for, develop, and produce mineral ores vary in detail; the objectives of the regulations are essentially the same. The main activities and their associated requirements are as follows:-

Prospecting

Most provinces issue prospecting licenses which are valid for one year; holders have the right to prospect and explore for minerals

on Crown lands, and to stake claims. BC issues a "Free Miner's Certificate" which grants essentially the same rights, Sask requires no permit but the staking and filing of a claim conveys exclusive rights to prospect and explore for minerals, etc. Prospecting licenses may grant the right to stake claims over broad areas, or they may grant exclusive rights to search within narrowly defined limits; this is generally dependent on the type of exploration being carried out.

Claim Staking

Claims are staked in accordance with specific regulations, and must be recorded with provincial mining authorities within a specific time limit. Rights to the claim exist as long as an annual work assessment is accomplished relative to the find. Such claims must be converted to leases within a certain period, usually 5 to 10 years; however, conversion is usually possible as soon as the total work requirement has been accomplished (e.g. 200 mandays in Ontario).

Mineral Leases

Claims are converted to leases either when the holder is prepared to commence production, or when the time limit for retaining the property as a "claim" has expired. The leases are generally for 21 year periods with provisions for renewal.

In the case of general minerals, leasing rights are not difficult to obtain providing the preliminary requirements of exploration and claim development have been met; annual rental rates on property are nominal. At the production stage however, the developer must comply with regulations covering safety requirements, production methods, environmental controls, etc. Environmental protection constitutes a major cost in certain types of operations, particularly those where methods may be surface destructive or processing by products may be harmful in nature.

4.0 MINING INDUSTRY OVERVIEW - US

4.1 Industry Administration (1)

Federal, state and local governments control many aspects of mineral discovery, development, production and distribution, as well as the economic and social concerns which influence mineral related decisions. The Federal government alone owns and manages one third of the nation's total land area, and essentially all of the millions of acres of off-shore lands.

The federal government also sets basic environment standards for land, air and water. It controls such things as taxation, foreign relations, the pricing of many materials, and millions of dollars in research funds - all of which have an influence on mineral supply.

State law continues to control much of the land activity in mining, typically the relations between owners of surface and mineral estates, and between owners of adjacent land. State tax laws, especially those which base taxation on the value of minable reserves, or which tax the severing of minerals, have a significant impact on mining - even to the extent of discouraging development.

State laws also govern the disposal of state lands for development, and there has been a trend toward State involvement in land use planning and zoning; most states now regulate mined land reclamation.

In Canada, the provinces own the land and mineral rights within their jurisdictional areas; thus provincial administrations legislate and apply their own mining laws. In the US however, the federal government owns large sectors of individual States, particularly in the west; thus the applicability of federal mining legislation varies from State to State. The States have the right to legislate their own mining laws and apply them only to those lands not under federal jurisdiction.

4.2 Industry Structure

For the vast majority of mineral resources on federal public lands, mineral disposal (including access for exploration and development) is provided for under two basic laws: the Mining Law of 1872, and the Mineral Leasing Act of 1920.

Under the Mining Law of 1870, rights to lands owned by the United States are initiated by finding property on which "locatable" minerals exist, staking them, and subsequently complying with State and federal requirements with regard to claim recording procedures. The Mineral Leasing Law covers only those minerals which the prospector may lease (typically oil, gas, coal and a number of other minerals); they may not be purchased outright as in the case of minerals subject to the Mining Law. The Mining Law is now out of date and congress is presently endeavouring to bring all minerals under the Mineral Leasing Act; as the law now stands (4), any American citizen can stake claims for "locatable" minerals, proper registration is the only requirement. Following this, the registree is free to develop the property without further permission from federal authorities.

In the case of minerals there is no universal policy with regard to jurisdiction, however federal laws apply only in those situations where the federal government either owns the land, or has patent rights to it. A major portion of the federally owned land is in the western states, typically 85-90% of Nevada belongs to the US government. There is also a limited amount of land east of the Mississippi which has been "acquired" since the founding of the initial 13 States. This contrasts with the situation in Canada where, with minor exceptions, all provinces own the mineral resources within their respective jurisdictions.

Oil and gas rights are subject to the Mineral Leasing Act, hence the resources can only be leased. Leases are let by means of tenders, however an exception exists in the case of the

"simultaneous filing" system. Under this arrangment, a number of tracts are made available each month for exploration purposes on a lottery basis; applicants pay a $10 fee to enter the lottery, they must be American citizens and be capable of paying $1 per acre per year should they "win" the exploration rights.

In the case of on-shore development, individual States share in the revenues from activities on federal lands within their boundaries; in the case of minerals not on federal lands, the state administrations have control, and their own laws apply. Off-shore exploration and development leases are also tendered, however the States neither share in the resulting revenues, nor do they have any authority over the operations. Nevertheless, they are involved to the extent that their environmental concerns are satisfied; also, the federal government must be assured of their willingness to co-operate in getting the resources ashore.

A major concern in the US mining industry in the past few years has been the growing reliance on foreign imports to meet domestic needs. Federal conservation and environmental policies are felt to be largely responsible for this situation; the widespread withdrawal of large acreages from operation of the disposal laws has seriously limited the land available for exploration and development. In 1976 the US mining production increased by only 1%.

A recent study comparing Canadian and US resource policies (2) indicates that Congressional support of the US mining industry has been less than that which has been provided by government in Canada. Typically the Canadian government has expended large sums of money in transportation and power plant constru tion in support of mining operations; similar construction in the US has primarily been directed towards other objectives. In addition, Canada has also contributed to the welfare and development of the industry by providing docking facilities, roads, air strips, housing etc.

The mining industry operates in a competitive atmosphere, and is made up of a wide range of sizes and types of producing operations. There are some very large companies such those engaged in the copper business in Arizona, and there are some very small operators who are essentially prospectors who sell their claims to the larger concerns. While a great number of small producing operations still exist, their future is growing more precarious because of the complications introduced by environmental restrictions; the resulting additional costs in the case of coal production in some regions has been reported to be as much as $8 a ton.

While State administrations generally have some form of equivalent to a Department of Mines, they are usually very small organisations in comparison to their provincial counterparts. In contrast to Canada where the lowest administrative level is the provincial government, US producers are subject to regulation down to the county level. Cameron (1) indicates that the resulting federal, state, local laws and restrictions are complicated by the inconsistencies of the policy objectives which underlie them, inevitably adding to legal difficulties and frustration for the producers at every step from exploration to production. It is felt that the country must find a way to eliminate the conflict and confusion which now pervades the land law framework; production goals cannot be achieved if government agencies continue to follow independent and disjointed policies.

Congressional support of the domestic mining industry has probably been somewhat less than that provided by the Canadian government. At least in part, this has been due to public recognition of the important role the industry has played in the development of Canada's domestic economy and export market. Canadian mining administration procedures are more clearly defined and less complex than their US counterparts, this is mainly because they originate at the federal and provincial government levels only in the various jurisdictional areas. (C).

Provincial administrations are larger than those to be found in the individual states, hence are better able to provide the support and encouragement required in their particular areas; furthermore, provinces enjoy full autonomy over mining operations, whereas US jurisdiction varies, much of the land within most western states being under federal control. Thus in Canada there is a far greater degree of homogeneity in the administrative process. (C).

Current problems in the Canadian mining industry have been generated in the present decade by tax law modifications; these have done little other than to discourage mining development. Problems in the US industry are largely the result of the complex land law framework within which the industry operates, the fact that so much land is being withdrawn from the disposal laws for conservation purposes. In both countries, the industry has been affected by the impact of environmental controls (C).

4.3 Entry

Ease of entry into the US mining industry appears to be greatest in the case of "locatable" minerals found on lands of the public domain. In such instances, the Mining Law of 1870 applies; hence no prospecting license or permit is required, and once an economic ore body has been located it can be produced as soon as a claim has been staked and filed with the appropriate local and federal agencies. Locatable minerals include most metals or substances other than oil, gas, coal, potassium, sodium, phosphate, oil shale, asphalt, bitumen, bituminous rock, oil impregnated rock, etc; these are covered under the Mineral Leasing Act.

Prospecting permits are good for a period of 2 years and must be obtained from the Dept of the Interior before searching for deposits which come under the Mineral Leasing Act; the Act applies in both public domain and acquired land areas. The permits grant

the exclusive right to prospect in the lands specified, and the right to remove such material as may be necessary to establish the existence of a valuable deposit.

Leases are generally issued for an indeterminate period but are subject to readjustment or renewal after 20 years. They include covenants relative to mining methods, periods of preliminary development and minimum production; royalty rates are determined on an individual basis and are set out in the notice of competitive lease offer. Annual rentals are nominal and do not exceed $1.00 per acre annually for coal, phosphate, potassium, sodium, sulphur and the hard rock minerals.

At the exploration level, entry is not difficult; if a search is to be made for "locatable" minerals on lands of the public domain then no special permits or licenses are involved. The related costs, as in the Canadian situation, are a function of the remoteness of the operation and the degree of sophistication employed during the exploration process. If the search is to be made on "acquired" land, then all minerals are subject to the Mineral Leasing Act. In most instances, basic annual lease rentals are nominal.

At the mine development and production level, entry is conditioned by the need for large amounts of capital. The initial expense is that of either locating or acquiring an ore body which can be economically developed. Subsequent mine development, and providing the infrastructure necessary to support it, comprise the major portion of the overall expense.

Ownership laws limit the issuance of prospecting permits and mineral leases to citizens, associations of citizens, and corporations organized under US laws. Aliens may own, or control stock in corporations holding permits or leases, providing their countries provide like priveleges to US citizens.

4.4 MINING - ENTRY CONTROL SUMMARY
(General Minerals)

	CANADA		U.S. FEDERAL	
A. REGULATORY INFLUENCES	FEDERAL	PROVINCIAL	PUBLIC DOMAIN	ACQUIRED
a) DIRECT (Prospecting):				
1) Ownership	Yes	Yes	Yes	Yes
2) Prospecting Permit	Yes	Usual	No	Usual
b) INDIRECT (Development/Production):				
1) Ownership	Yes	Yes	Yes	Yes
2) Lease conversion/or mining permit	Yes	Yes	No	Yes
c) INDIRECT (Development/Production):				
1) Production controls	Yes	Yes	Yes	Yes
2) Safety controls	Yes	Yes	Yes	Yes
3) Environmental controls	Yes	Yes	Yes	Yes
4) Reclamation requirements	Yes	Yes	Yes	Yes
B. NON REGULATORY INFLUENCES				
1) Taxation Policies 2) Financing 3) Infrastructure Needs 4) Environmental, Reclamation Costs, etc.)	Yes	Yes	Yes	Yes

COMMENTS: The mining industry is highly competitive, and activity is sensitive to government taxation and incentive policies. Entry is essentially open; while opportunities exist for the entrepreneurial undertakings they are conditioned by large capital requirements, particularly at the development and production levels. Federal and provincial taxation policies have tended to discourage industry development in recent years.

References - Mining

(1) "The Mineral Position of the US 1975-2000"
by: Engene Cameron (Chapter on land management and mining law). 1973.

(2) "Comparative Study of Canada/US Resource Programs" (1975)
by: Us Geological Survey, US Government.

(3) "Is our Account Overdrawn"
by: G. Bennethum & L.C. Lee
Mining Congress Journal, published by the Americain Mining Congress (undated).

(4) Contact M-3

(5) Canada Year Book (1976-1977)

(6) "Statement of Concern" (1977)
by the Mining Association of Canada. (pamphlet)

(7) "Factors Influencing the Mineral Economy of Canada" (1970)
by the Department of Energy Mines & Resources.

(8) Contact M-5

(9) Code of Federal Regulations:
Public Lands: Interior (Part 1000 to end)
National Archives & Record Services, US Govt.

(10) Politics, Minerals and Survival (1974)
By: Ralph Marsden. Pub: Society of Economic Geologist Foundation, Inc.

(C) Consultant's comments.

COMMUNICATIONS - US

1.0 THE COMMUNICATIONS ACT OF 1934

The Communications Act of 1934 coordinated in the Federal Communications Commission broadcast regulatory functions previously exercised by the Federal Radio Commission, which was abolished by the Communications Act; supervision of certain telegraph and telephone operations formerly vested in the Interstate Commerce Commission; jurisdiction over Government telegraph and telephone operations formerly vested in the interstate Commerce Commission; jurisdiction over Government telegraph rates that had been under the Post Office Department, and some powers of the Department of State affecting the Cable Landing License Act. The Communication Act gave the Federal Communications Commission additional authority, including supervision of rates of interstate and international common carriers, and domestic administration of international agreements relating to electrical communication generally.

The stated purposes of the act are "regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all people of the United States a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges... the national defense... promoting safety of life and property through the use of wire and radio communication..."

It applies "to all interstate and foreign communication by wire or radio and all interstate and foreign transmission of energy by radio, which originates and/or is received within the United States, and to all persons engaged within the United States in such communication or such transmission of energy by radio, and to the licensing and regulating of all radio station....".

2.0 THE FEDERAL COMMUNICATIONS COMMISSION

The Federal Communications Commission began to function on July 11, 1934. It is composed of seven Commissioners appointed by the President, subject to confirmation by the Senate. One of the Commissioners is designated Chairman by the President. Not more than four Commissioners may be members of the same political party. The normal term of a Commissioner is seven years.

The authority of the Commission extends to Guam, Puerto Rico and the Virgin Islands, but not to the Canal Zone. It does not regulate Federal Government radio operation.

The Communications Act limits licensing by the Commission to citizens of the United States. It denies the license privilege to corporations in which any officer of director is an alien, or of which more than one-fifth of the capital stock is owned or controlled by foreign interests. In the interest of air safety, waivers may be granted to certain noncitizen pilots of aircraft operating in this country.

The Commission is responsible for the domestic administration of wire and radio provisions of treaties and other international agreements to which the United States is a party.

Under the Act, the FCC's regulatory powers fall into three major categories - common carrier services (telephone and telegraph by means of radio and wire, including submarine cable); non-broadcast radio services (safety and special); and broadcast (or program) services.

Extensive revisions of the act - particularly in 1952 and during the period 1960 to 1962 - made important changes in the Commission's organization and procedures. The Communications Satellite Act of 1962 gave the FCC new responsibilities with

respect to space communication. A Presidential Executive Order of 1963 augmented its duties to ready the communication services under its jurisdiction to deal with possible national emergency situations.

3.0 F.C.C. REGULATORY ACTIVITIES

3.1 Common Carriers

The Commission regulates interstate and foreign communication by telephone and telegraph, whether by wire (including submarine cable), radio, or satellite. Purely intrastate communication is not subject to FCC jurisdiction but comes under the authority of state utility commissions.

3.2 Satellite Communications

The Communications Satellite Act of 1962 provides for U.S. participation in a global commercial communiations satellite system by a private corporation - the Communications Satellite Corporation - under Government regulation. The principal tasks of that corporation are to plan, establish and operate the system in cooperation with other nations to furnish, for hire, satellite relay of international and interstate telephone and telegraph services, including television.

The U.S. portion of the system is subject to the same regulatory controls by the FCC as are other communications common carriers. The Commission must ensure effective competition in the procurement of equipment and approve all financing by the corporation, except the initial stock issue. In addition the FCC must approve the technical characteristics of the satellite system and authorize terminal stations in the U.S.

3.3 Broadcast

The Communications Act deems broadcasting not to be a common carrier operation and enjoins the Commission from censoring programs or interfering with the right of free speech on the air. Consequently, FCC regulation of broadcasting concerns two general phases:

1. Allocation of portions of the spectrum to the different types of broadcast services in accordance with the Commission's rules and regulations to carry out the intent of international agreements, the Communications Act and other domestic law affecting broadcasting.

2. Consideration of individual stations, applications to build and operate; assignment of frequencies, power, operating time, and call letters; periodic inspection of equipment and the engineering aspects of operation; renewal of licenses and transfers and assignments of facilities; modifications and changes in existing facilities; and licensing operators of these (as well as all other nongovernment) transmitters.

3.4 Safety & Special Services

The Communications Act requires the Commission to study new uses for radio and encourage its development. The act also stresses the use of radio to protect life and property.

To realize these objectives, the Commission has authorized many uses for radio other than for broadcasting and common carrier services. Collectively these new radio services, together with some older ones, make up a group known as the Safety and Special Radio Services. These services, in effect, embrace practically all radio operations that are neither broadcast nor, for the most part, open for hire to the general public.

The Safety and Special Radio Services cover use of radio by ships afloat and planes in the air; by rail and motor carriers; by agencies concerned with police and fire protection, and national defense and other emergency services; by industry, manufacturers, public utilities and other business; and by individuals for private convenience or for amateur communication.

These services are governed in general by the Communications Act, international agreements, and by the Commission's rules and regulations dealing with the particular class of service authorized to use radio.

3.5 Cable Television

The Commission asserted limited jurisdiction over cable TV in 1962, first establishing rules in 1965 for systems that received signals by microwave (Microwave stations have always been FCC-licensed.) In 1966, the Commission established rules for all cable systems, whether or not served by microwave. An extensive revision of the rules was adopted February 2, 1972, and became effective March 31, 1972.

4.0 BROADCAST (AM, FM, TV)

4.1 Industry Structure

The present structure of the US broadcast industry is very largely the result of the regulatory environment in which it has hitherto operated. Policies designed to ensure the equitable distribution of broadcast services; to avoid concentration of ownership and control; and to ensure that competition played a significant role

in providing programming diversity, largely accomplished their objectives. However, the TV licensing freeze in effect between 1958 and 1962 (while UHF TV policies were being developed) had secondary effects which materially slowed the development of UHF television as an effective competitive force in the broadcast field.

In order to ensure " a fair and equitable distribution of radio service" the FCC adopted the policy of granting a large number of licenses to low power stations in both urban population centres, and in the less densely populated communities. It also promoted the widest possible diversity of broadcast programming by ensuring that the industry operated in a highly competitive environment. The policy of "localism" combined with that of "diversity" form the basis of FCC regulation (6).

Chain broadcast regulations were designed to avoid network domination of local stations, thus ensuring that local operators have the freedom necessary to meet their primary obligation of serving the public interest. Substantially the same rules were originally imposed on AM, FM and TV. However, changes in the nature of radio network programming which have occurred since the original rules were formulated in 1941, coupled with the ability of local stations to select their own programs, are now considered adequate to protect the concept of diversity and localism. In consequence, AM and FM were recently exempted from all but one of the chain broadcast regulations. While the regulations concerned have in large part kept the networks from totally dominating ownership and control of local stations, they have failed to keep them from unduly influencing program choice in major television markets. As a result, the Commission initiated an inquiry into television practices and policies in 1977.

Multi-ownership rules were designed to prevent anyone gaining a dominant position in station ownership and control; in 1975 the rules were extended to prohibit newspapers from acquiring broadcast licenses in the newspapers' market areas. The rules for AM, FM and TV are substantially the same, however in the case of non-commercial educational FM and television certain exemptions from the normal rulings apply. It should be noted that there is no restriction on common ownership of AM and FM stations in the same area, only common ownership of the same type of radio station and/or television station in the same area is precluded.

Between 1948 and 1952 the FCC froze television licensing while decisions were being made regarding the allocation of additional spectrum space for television broadcasting; in 1952 the Commission added 70 UHF channels to the existing 12 VHF. During the four year period, the existing television broadcasters established a firm hold on the major markets, making the outlook for UHF market development bleak. The UHF television potential was worsened by the fact that existing domestic sets lacked UHF channel facilities; the situation was still further complicated by the propagation limitations of the new UHF channels.

To alleviate the situation, Congress passed the All-Channel Act in 1962 which prohibited interstate transport of any domestic receivers not equipped to handle both VHF and UHF signals. Although this measure helped considerably, it is only in very recent years that UHF stations in some areas h ve begun to show a profit. As a result, UHF broadcasting has been unable to achieve the degree of competition for VHF that the FCC originally envisioned (6).

The Public Broadcasting Act was passed in 1967. It created the private, nonprofit Corporation of Public Broadcasting which is responsible for the funding of nonprofit public radio and television broadcasting. To nsu re that public broadcast programming would not be influenced by government or private contributors, it

also created the Public Broadcasting Service; this is an autonomous organization responsible for nationwide selection, scheduling, promotion and distribution of public broadcast programming.

Proponents claim that these two organisations have enabled non-commercial, educational, public broadcasting to take on the characteristics of a fourth national network which offers the viewer the opportunity to experience programs of greater diversity, and often controversy, than generally offered by commercial stations. Critics argue that it has neither increased diversity nor promoted controversial programming; that its programs are designed to attract the higher income groups from whom contributions can be solicited.

A number of problems exist in the industry, not the least of which is one related to censorship. The Communications Act divests the FCC of any powers of censorship, thus making it difficult for the Commission to deal with public complaints about sex and violence contained in entertainment programs. The Commission's only recourse in such situations has been in its mandate to ensure that licensees provide the types of programs which communities desire (1). However the Commission's ability to act is restricted to those occasions when licenses come up for renewal. License renewal is generally little more than a formality except in those cases where public complaints have been filed concerning station operation, or program content. Ownership rulings have resulted in the industry being segmented amongst a large number of operators; the resulting limitations placed on the number of stations which can be controlled by any entity has led to difficulties in areas where there has been a high proportion of ethnic groups; the ruling has restricted their ability to obtain adequate outlets.

4.2 FCC License Processing

The Communications Act requires that the Commission grant the broadcast license if "the public interest, convenience and necessity is served by the granting thereof". At the time of submission, the applicant is required to give local notice of his plans in order to afford an opportunity for public comment. All broadcast applications are reported twice by the FCC: when first received, and again when formally accepted for filing.

Applications are not acted on until 30 days after the FCC gives public notice of its acceptance for filing. Competing broadcast applications and objecting petitions may be filed up to 30 days following the notice that the original application is ready for processing. If the FCC's review determines that all financial, legal and technical requirements have been met, and there are no petitions or competing applications, then the application may be granted and a construction permit issued. Petitions for reconsideration of grants made without hearing may be filed within 30 days of the date notification is given that such grants have been made; however, these must show good cause why objections were not raised before the grant.

Hearings are usually required when an application fails to meet the Commission's requirements, protests of merit, or competing applications exist. Hearings are conducted by an administrative law judge; applicants or other parties may contest initial decisions within 30 days. A review board may modify or reverse the judge's initial decision; in cases where the review board has acted on exceptions, an appeal from its decision may be taken to the FCC within 30 days; however the FCC may deny such appeals for review without giving reasons. Court appeals may be taken within 30 days of the release of final decisions, in which case the Commissions action is stayed pending the court decision.

Application and Construction

The following constitute the major steps associated with the licensing and construction of a broadcast facility:

A) Research of Program Needs

Prior to making formal application for a Construction Permit, applicants are required to research the proposed market area to determine the nature of the public's program requirements.

B) Application for Construction Permit

The applicant applies for a Construction Permit; pertinent to such submissions to the FCC will be demonstration of compliance with the following:

a) applicants must be US citizens, or corporations whose directors are US citizens. At least 80% of the financing must come from non-alien sources.

b) the financial capability of the applicant must be such that he can construct the facility, and operate it for one year without revenue support.

c) applicants must have the technical expertise and qualifications necessary to construct and subsequently operate the installation.

d) the applicant must submit all technical information relative to the proposed installation and its performance characteristics; information relative to the service proposed and the nature of the programming content must also accompany the application, together with the results of the survey of the area's programming requirements.

C) Issue of Construction Permit

Assuming that the application has been approved by the FCC and a Construction Permit has been issued, then the following requirements and events obtain:

a) station construction is required to commence within 60 days and be completed within a 10 to 18 month period, depending on station type.

b) upon completion of construction the applicant conducts equipment tests.

c) application is made for a Broadcast Station License. At this time the applicant must demonstrate compliance with all conditions and obligations of the original application and Construction Permit.

D) Issue of Station License

The FCC issues a station license.

4.3 Entry

The broadcast industry is highly competitive and it is estimated that less than 75% of the undertakings can be classified as acceptably profitable in the US (1). Once outside the top 100 areas, broadcasters are getting into very thin markets, in consequence many are marginal.

Entry is limited to a total of seven stations in the same service nationally, and only one station in the same service in any given market area. In the top 50 markets, operators are limited to two VHF and one UHF television station.

Applicants must be US citizens, or corporations controlled by US citizens; 80% of all financing must be derived from US sources. Mergers and acquisitions are strictly controlled, and financial competence must be adequate to construct and operate the installation for one year without revenue. In the case of new installations, applicants require a certificate of public need from the FCC.

Capital requirements constitute the major barrier to entry; in the more viable markets, acquisition would be the most practicable means of effecting entry.

Canadian policies with regard to ownership and control are generally more flexible than in the US. In certain areas Canadian policies are specific, typically licenses won't be issued to banks, common carriers, government bodies, etc; in other areas however, the CRTC tends to deal with the ownership question on an ad hoc basis. This leads to problems for potential entrants since they have limited means for assessing what attitude the commission may take towards any given application. In the US, ownership eligibility is defined in more specific terms, particularly with regard to the total stations of various types and the conditions under which common ownership and control will be permitted.

CRTC closely monitors station operations and exercises more direct control over program content than the FCC. The FCC exercises no direct jurisdiction over program content, however if public complaints are significant they will be taken into account when station licenses come up for renewal. The amount of advertising permitted is controlled, more being allowed in the US than in Canada.

Chain broadcast regulations in the US are designed to prevent local stations being forced into network contracts which will limit their ability to function in the public interest. The more

important regulations in this respect include the following:

1) No network affiliation can prevent a station from broadcasting other network programs.

2) An area station network contract may give the station first call on network programs, but may not prevent other area stations from using programs the network station does not choose to broadcast.

3) Station contracts for network affiliation are limited to 2 years.

4) Local stations may reject network programs.

5) Networks cannot own or control more than one broadcast station in the same service area, or in any situation where such ownership would restrain competition.

6) No station may contract with a network organisation which maintains more than one network of broadcast stations.

7) Networks cannot alter or fix the broadcast time rates for other than their own programs.

The more important US broadcast entry controls are listed below:

A) Direct:

1) FCC certificate of public need.

2) US citizenship or corporations controlled by US citizens.

3) Acquisitions, mergers, etc subject to FCC approval.

B) Indirect:

1) Financial capability to construct and operate station for one year without revenue.

2) 80% of financing from US sources.

3) Ownership limited to:
   a) one full time station in any one locality.
   b) total of 7 stations in the same services (nationally)
   c) five television stations in the VHF band.
   d) maximum of two VHF and one UHF station in the top 50 markets
   e) educational TV in the case of State administrations.

4.4 BROADCAST (AM, FM, TV) - ENTRY CONTROL SUMMARY

	CANADA	USA
A REGULATORY INFLUENCES	Agencies: CRTC/DOC	Agency: FCC
a) DIRECT:		
1) Certification of Public Need: (Ownership, technical & financial competence, etc)	Yes	Yes
2) Mergers, acquisitions, etc.	Yes	Yes
b) INDIRECT:		
1) Financing arrangements	Yes	Yes
2) Extent of advertising	Yes	Yes
3) Program content	Yes	No
4) Network arrangements	Yes	Yes
5) Policies re multiple ownership, restrictions on B'cast control, etc	Yes	Yes
6) Technical compliance	Yes	Yes
7) Effect on competition	Yes	Yes
B NON-REGULATORY INFLUENCES		
1) Capital requirements) 2) Frequency availability) 3) International requirements)	Yes	Yes

COMMENTS: Broadcast industry is highly competitive, particularly in the US. In many of the better market areas acquisition is the only practicable means of entry; thus financing is a major consideration to the potential entrant.

5.0 COMMUNICATIONS - CABLE TELEVISION (2)

5.1 Cable Television Franchises

A cable television franchise usually is adopted in the form of a local ordinance by the city council or other local government body that has franchising authority. Although the FCC has set down many rules and guidelines, each community must decide what sort of franchise it wants, write the franchise, and award it.

Local authority to franchise and regulate cable television derives from the cable system's need for access to city streets and other rights-of-way. Yet local planning and franchising must take place within the framework of federal and state laws and regulations. Chief among these is the recent CABLE TELEVISION REPORT AND ORDER, adopted by the FCC on February 2, 1972, which contains rules and guidelines that strongly affect the choices open to local franchising authorities.

In 1972 FCC rules emerged as a compromise among cable, broadcast, and program copyright interests. The rules are complex, difficult to read and often ambiguous and the FCC itself is continuously reconsidering the rules as it acts to certify local franchises. Thus the federal rules for cable are still evolving.

5.2 FCC CATV Rules - Salient Points

* Different rules apply to cable systems located in major metropolitan areas - the 100 largest television markets - and in smaller communities. A community is considered to be in one of the top 100 markets if it is within 35 miles of a central reference point listed by the FCC for each market.

* Cable systems must carry all local broadcast television stations, including educational stations, television "translators" (i.e., relay stations), and stations beyond 35 miles that are "significantly viewed" in the community.

* In addition, cable systems may bring in signals from other cities up to certain limits.

* They also can carry additional educational and foreign language stations.

* If a major market cable system wants distant signals from any of the top 25 markets, it must select them from one of the nearest two (with certain exceptions) 3.

* A cable system cannot import any program that a local broadcaster has the exclusive right to show.

* The rules require local franchise authorities to follow certain standards if their franchises are to obtain an FCC "certificate of compliance" - without which the cable system cannot carry any broadcast signals.

* In granting a franchise, the local authority must consider the "legal, character, financial, technical, and other qualifications" of applicants by means of a "full public proceeding affording due process".

In summary, the 1972 FCC rules permit major market cable systems to import some television signals from other cities in return for increasing system capacity and dedicating some channels to nonbroadcast use. They also limit the local franchising authority's power to impose on cable operators high franchise fees, additional capital investment requirements, or demands for free services. Finally, they introduce some uniform procedures and a modicum of public participation into the franchising process.

5.3 State Regulation of Cable

Several states have also entered the regulatory picture. Connecticut, for example, has taken cable television franchising completely out of the hands of local authorities. The Connecticut Public Utilities Commission creates franchise districts crossing local jurisdictional lines, grants awards, and administers the franchises. Hawai, Nevada, Rhode Island, and Vermont also have enacted legislation giving the state public utilities commission regulatory authority over cable television. On the other hand, the Utah Supreme Court recently ruled that cable should not be regulated as a public utility in that state.

Massachusetts has established a Community Antenna Television Commission; without itself holding the power to franchise, the Commission can issue standards and regulations that local franchising authorities must follow. New York also has adopted legislation creating a state Commission on Cable Television, and other states such as Illinois, Iowa and California are exploring this route.

5.4 Methods of Awarding Franchises

Two basic approaches, negotiation and competition, have been used in cable planning and franchising. Under the first, the city selects a prospective cable operator and negotiates the many terms and conditions that will go into the franchise. Often, the city bargains informally with several potential operators before entering into serious negotiations with one. If the negotiations break down, the city may turn to another prospective grantee.

The negotiation approach has the advantage of flexibility and expedites the planning and franchising process since it involves relatively few participants. Its major disadvantages are:

a) early selection of an operator can arouse complaints by other prospective candidates who feel unfairly shut out.

b) it does not permit the degree of community participation that citizen groups often demand, and

c) however scrupulously the negotiations are conducted, the participants are vulnerable to suspicion by outsiders that under-the-table dealings are going on.

In contrast, the competitive bid and award approach involves a longer and more formal proceeding in which the franchise authority must detail the terms and conditions of the franchise in advance. The authority then invites bids from all interested parties and makes the award according to preestablished criteria.

This approach seeks to avoid any real or alleged favoritism toward a particular prospective grantee, and usually provides more opportunities for citizen participation throughout the process. Its disadvantages lie in being potentially

a) more time-consuming

b) more costly in terms of both staff and consulting time required by the franchising authority, as well as additional burdens placed on franchise candidates, and

c) less flexible insofar as the franchising authority has greater difficulty in modifying its earlier decisions about terms and conditions once its Request for Proposals is issued.

5.5 Industry Structure

Unlike the broadcast operator, the cable television entrepreneur is not limited to the number of franchises which he may hold; hence two-thirds of the industry is made up of ten or fifteen companies. While there is a great deal of competition to obtain franchises in various communities which have economic potential, once these have been acquired there is little reason for competition. Nevertheless, occasional stirs develop when one operator attempts to take over another.

For the most part franchises in the denser market areas have been taken up. Though a large number of communities are still open for cable service, many have marginal potential; entry to the more profitable markets is largely limited to acquisition, and the major barrier to industry access would therefore be the financing requirements (C).

5.6 Summary of Entry Controls - US Cablevision

A) Direct

1) Award of franchise by local authorities following:

   a) consideration of applicant's qualifications
   b) agreement with applicant re system facilities to be provided
   c) public hearing

2) FCC Certificate of Compliance requiring:

   a) rate approval by franchising agency
   b) initial franchise period to be limited to 15 years

c) satisfactory provision for handling of customer complaints

d) commencement of construction within one year of FCC issue of Compliance Certificate

e) wiring of substantial percentage of the franchise each year (20%)

f) that franchise fees not exceed 3% of subscriber revenues without special FCC approval.

B) INDIRECT — In the case of cable systems in the top 100 markets:

g) all cable systems must carry the following local signals upon request of the station licensee:

1) all markets within 35 miles
2) Grade B signals of educational television stations
3) all translator stations in the community with 100 watts or higher power.
4) "Significantly viewed" stations

h) 20-channel minimum capacity, or at least one channel available for nonbroadcast use for each channel carrying broadcast signals

i) Some two-way capacity

j) three channels reserved for local uses: one each for education, local government and public access. (Local government channel to be free of charge for at least five years, the public access channel to be free indefinitely).

k) Local programming to a "significant extent" if system in excess of 3500 subscribers.

l) unused capacity to be available on a leased basis. Additional channels to be added for lease when required.

Minium technical performance standards for broadcast channels.

In the case of cable systems in smaller markets:

g) All cable systems must carry the following local signals upon request of station licensee:

1) all stations within 35 miles
2) grade B signals of educational television stations
3) all translator station in the community with 100 watts or higher power
4) "Significantly viewed" stations
5) Grade B signals from stations in other smaller markets.

6.0 COMMUNICATIONS - COMMON CARRIERS

6.1 Mobile

6.1.1 General

Mobile common carriers typically provide radio-telephone and radio paging services to the public on a for-hire basis. Wireline (telco) and non-wireline (RCC) operators supplying mobile radio services are subject to licensing by the Mobile Common Carrier division of the FCC.

NOTE: the term "radio common carriers" (RCC's) in the sections which follow is used to distinguish between operators who are primarily dependent on radio, and those who are not (telcos). Actually, wireline common carriers (telcos) are also licensed as RCC's.

6.1.2 State Regulation

State regulatory bodies, where they exist, are interested in the activities of the local market areas from the viewpoint of mobile common carrier operations. Although some administrations display no interest in the regulation of mobile common carriers, more and more are becoming involved. The degree of interest varies from State to State. Connecticut makes no attempt to regulate such operations, while Texas and New York are greatly concerned. In between, varying degrees of control are applied, some States only being interested when an RCC is interconnected with the public network.

The FCC method of processing mobile common carrier applications is therefore dependent to a certain extent on the attitudes of the States concerned. Typically, applicants from such areas as Texas and New York must obtain certificates of public need and necessity from their respective administrations. Those from such areas as Connecticut require no such certification as a prerequisite to an FCC application for the operating license.

6.1.3 Industry Structure

Any potential RCC operator has the right to establish a mobile common carrier system providing frequencies are available, however new applications frequently run into opposition because they usually threaten the revenues of existing operators. Almost any argument will be used in petitions against new services. Normally, hearings do not occur unless some form of petition exists; however, whenever an applicant attempts to break into a competitive area, or where the potential for interference exists, then a large number of objections are generally encountered.

If the problems raised by petitioners cannot be resolved at the licensing level, the matter is taken over by the legal branch of the FCC division concerned. If this fails, the matter goes to a hearing before a judge; at this point the proceedings become costly because of the legal time involved.

The RCC market is highly competitive, and because of the large number of operators involved there are not enough frequencies. In the case of the wireline common carriers operating in RCC markets, the situation is relieved by two factors: firstly, separate groups of frequencies are available for telco use, and secondly the number of telcos operating in any given area is limited to one or two.

The Commission is seeking relief from the present frequency situation by:

1) encouraging the use of cellular systems in the new 800 MHz band

2) the use of TV channels (Chs 14-20) in certain of the larger cities

3) considering the possible use of some existing two-way frequencies for one-way purposes, thus encouraging wider use of paging systems which are more spectrum efficient.

6.1.4 Entry

Except for the certificate of public need which must be obtained in the case of applicants from certain states, other application requirements are relatively standard and are similar to those which exist in Canada.

Licensees must be US citizens, or corporations directed by US citizens. 80% of corporation financing must originate from non-alien sources. Where required by State authorities, certificates of public need are a prerequisite to application for an FCC license.

Applicants are required to demonstrate financial capability, and also that leasing arrangements for potential sites are adequately committed. All relevant engineering data and system detail must be provided, and a co-channel interference study must be carried out in the area of operational interest by the applicant.

6.1.5 MOBILE COMMON CARRIERS - ENTRY CONTROL SUMMARY

A. REGULATORY INFLUENCES	Intrastate
a) DIRECT:	Agency: FCC
1) Certification of Public Need: (requirement for service; ownership; financial, technical competence)	Yes (State involvement)
2) Mergers, acquisitions, etc.	Yes
b) INDIRECT:	
1) Financial regulation	No
2) Filing of rates and tariffs	No
3) Technical compliance	Yes
4) Exit control	No
B. NON-REGULATORY INFLUENCES	
Frequency availability	Yes
Opposition from existing common carriers	Yes

COMMENTS: Mobile common carrier activities include service of the type normally provided by restricted common carriers in Canada (eg mobile radio and paging); such operations are essentially intrastate in nature. State interest in mobile common carrier activities vary, however all local administrations have the right to regulate the non technical aspects of these operations. The environment is extremely competitive and the availability of frequencies is a major barrier to entry in the VHF spectrum.

Mobile Common Carrier assignments in the US are not necessarily exclusive. With the present shortage of frequencies, many applicants are willing to accept some measure of interference from others. FCC Rules define the degree to which the Commission is committed to protect existing services, and new systems capable of functioning within these limits and willing to accept any resulting interference to their own systems may be licensed (4).

Entry into market areas with significant potential is difficult. At 150 MHz and below, the availability of frequencies is a deterrent, while opposition from existing operators functioning in the same market area will be acute. Frequencies are available in the new 800 MHz band in many areas, and although the resulting frequency relief eases the situation, the entrant must still contend with competitor opposition; furthermore, development is still in progress in some of the 800 MHz equipment areas and FCC standards for cellular systems are not yet complete (5).

6.2 Point-to-Point

6.2.1 General

The FCC supervises charges, practices, classifications, and regulations of inter-state and foreign communications by radio, wire and cable. The states regulate the wholly intrastate aspects of communications services, and there is economic separation between investments inter and intra-state. Regulatory controls imposed at the state level vary from one jurisdiction to another; some administrations have regulatory bodies which are on a level with those of the FCC, while others either lack the necessary resources, or for other reasons don't have effective agencies. The result is that common carrier activities in some states are relatively free from regulation, while in others, such as New York and California the controls are strict.

6.2.2 Industry Structure

Prior to the 1950s, the common carrier industry in the US was for the most part made up of the established wire line common carriers: Bell (AT & T), the independent telephone companies and Western Union. During the 1950s, demand developed for new and specialized services not available from the traditional carriers, and the FCC embarked on new policies which had a tremendous impact on the common carrier industry. The basis for this new policy was the identification of markets which were conducive to competition, and the subsequent authorization of new entrants into those markets.

In 1959 the "ABOVE 890 DECISION" cleared the way for private operation of point-to-point, long distance microwave facilities. At that time the FCC reached the conclusion that:

1) certain communications needs were not being met by the traditional carriers,
2) adequate microwave frequencies were available,
3) existing carriers would not suffer adverse economic effects from private point-to-point communications systems.

The AT & T responded by refusing to interconnect private systems, and by offering new services such as TELEPAC and WATS.

Private microwave systems proved too expensive for many users; at the same time the rapid rise of the computer industry was creating a demand for digital communications services to which existing telco facilities were not well adapted. This led to the "SPECIALIZED COMMON CARRIER DECISION" in 1971 which established the current FCC policy of favouring competitive entry in specialized communications fields.

In subsequent rulings relating to private-line services, the Commission has reaffirmed its multiple-entry policy. In 1972 the "DOMSAT DECISION" authorized multiple entry of specialized common carriers into the satellite field; in 1973 "VALUE ADDED CARRIERS" were also permitted to begin offering specialized services; in 1976 the Commission adopted a policy favoring the resale and sharing of private-line facilities and services, previous common carrier restrictions on these practices being ruled contrary to the public interest.

The most recent development in the competition question was the "EXECUTNET DECISION". Execunet is a service offered by MCI whereby a subscriber may use any pushbutton phone to reach any phone in distant cities served by MCI by dialling a local MCI number, followed by an access code and the telephone number in a distant city. MCI maintain that Execunet is a private-line service authorized by the Specialized Common Carrier Decision; the Commission maintain that Execunet is essentially a switched public message telephone service, and therefore unlawful. The US Court of Appeals ruled that before the FCC can deny a permit for any tariff offering such as that applied for by MCI, it must determine that the public interest requires such a denial; the court pointed out that the Specialized Common Carrier Decision did not support the Commissions conclusion that revenue diversion from AT & T's message telephone service required rejection of MCI's Execunet service. It is now up to the Commission to determine that the public interest consideration requires a denial.

FCC policies with regard to terminal equipment were motivated (as in the private-line case) by complaints that the established carriers were not meeting user needs. The revised policies have had a significant impact on the industry by encouraging the development of specialized equipment, prompting changes in telephone tariffs, and providing users with a wider range of equipment choices.

Federal policy for the past twenty years has been to permit competition in the common carrier field whenever public interest is served by so doing. This has opened up opportunities for hundreds of companies either as equipment suppliers or providers of common carrier services. Established carriers have been forced to provide new services, restructure their rates more competitively, and to pay closer attention to user requirements in general. Interconnection of privately owned terminal equipment as well as private line systems is now possible; thus the user now has greater variety of communications options, and the manufacturing industry has a significantly greater market for its communications products.

6.2.3 Entry

Entry to the traditional wire line common carrier markets controlled by Bell, AT & T, and the independent telephone companies would be difficult, and could only be realised through acquisition. However access to services of a more specialized nature such private-line operations is virtually wide open; the major barrier in such cases is that of capital formation. Few investors are willing to pit their resources against AT & T, RCA and other large companies competing in the same business areas.

Specialized common carrier entrants seeking to establish interstate services make application for a Section 214 certificate; in the event that radio facilities are involved, application is also made for a Section 309 certificate. Both involve certification of public need, however the public interest determination that the offering is in the public interest has already been established in FCC Docket 18920. Considerations such as wasteful duplication of services, economic harm to existing carriers etc., are not valid arguments for application denial. Under the Execunet Decision, any objections which may be raised against such applications come at the time of tariff filing, however these relate to the terms and conditions of service rather than the service itself.

Once the legal requirements have been met, and the formality of the Section 214 (and 309 where applicable) procedures have been dispensed with, the applicant is free to proceed with interstate services. The requirement to demonstrate financial and technical competence still exists along with the need for approval of acquisitions, system extensions, service reduction or discontinuance etc.

Purely intrastate common carrier activities are a state responsibility and Section 214 certification per se, is not required; however the Section 309 requirement must be met in all situations where radio facilities are involved. Controls imposed at the State level vary, hence entry difficulties are affected accordingly in intrastate services.

6.2.4 COMMON CARRIERS - ENTRY CONTROL SUMMARY
(Traditional Common Carriers)

A. REGULATORY INFLUENCES	Interstate	Intrastate
a) DIRECT:	Agency: FCC	*Agency: FCC & State
1) Certification of Public Need (ownership, service need, financial & technical competence, etc.	Yes	Yes
2) Mergers, acquisitions, etc.	Yes	Yes
b) INDIRECT:		
1) Financial regulation	Yes	Yes
2) Rates and tariffs	Yes	Yes
3) Technical compliance	Yes	Yes (FCC for radio)
4) Service changes	Yes	Yes
5) Exit control	Yes	Yes

B. NON-REGULATORY INFLUENCES

1) Capital requirements

COMMENTS: Entry to common carrier markets is restricted by policies designed to protect those areas traditionally considered the preserve of the wire line carriers (eg message toll services, etc). Entry to such market operations is, for all practical purposes, limited to the acquisition of existing common carrier entities which are not primarily engaged in "specialized" services. States have the right to regulate intrastate common carrier operations, however such involvement varies from area to area.

*NOTE: FCC involvement in radio applications (requirement for section 309 certification, etc).

6.2.5 SPECIALIZED COMMON CARRIERS - ENTRY CONTROL SUMMARY

A. REGULATORY INFLUENCES	Interstate	Intrastate
a) DIRECT:	Agency: FCC	*Agency: State
1) Certification of Public Need: (ownership, financial & technical competence, etc)	Yes	Yes
2) Mergers, acquisitions, etc.	Yes	Yes
b) INDIRECT:		
1) Financial regulation	No	Doubtful
2) Filing of rates and tariffs	Yes	Yes
3) Technical compliance	Yes	Yes (FCC for radio)
4) Service changes	Yes	Yes
5) Exit controls	Yes	Yes
B. NON-REGULATORY INFLUENCES		
1) Capital requirements	Yes	Yes
2) Frequency availability	Yes	Yes

COMMENTS: The public need aspect has already been established by FCC Docker 18920, thus entry to specialized common carrier fields is effectively open to those with the legal financial and technical qualifications. Finance is the major entry barrier since investors not anxious to compete with AT & T and other large operators in the same business areas. States have right to regulate intrastate activities, but involvement varies from area to area.

*NOTE: Fcc involvement in radio applications (requiring section 309 certification).

7.0 COMMUNICATIONS - SAFETY & SPECIAL SERVICES

7.1 General

The Safety and Special Services Radio Services branch of the FCC cover practically all radio uses other than those provided by broadcast and common carrier operators. There are four major service classifications, each being broken down in a number of sub-groups:

1- Safety Services: aviation, marine, police, fire etc.
2- Industrial Services: power, petroleum, forest products, business etc.
3- Land Transportation: rail, motor carriers, taxicabs, etc.
4- Miscellaneous: amateur, personal, disaster, etc.

7.2 Licensing Policies

The spectrum is divided into blocks of frequencies, each service being allocated a particular segment. Eligibility provisions for each of the various services ensures that licensees are coherent with all others in the same services; the philosophy is that the same user types should be grouped together, and that all should be permitted to share what spectrum space is available.

Non-block allocation methods are being tried out in recently opened areas such as the 475-512 MHz band. Industrial users are assigned sequentially from one end of the band, and public safety users from the other; however, it is feared that the policy will lead to domination of the bands by business services because government affiliated users are slower to react to their communications needs (7).

Frequency selection is the responsibility of applicant in many areas; however co-ordination groups exist to assist potential spectrum users in finding a frequency suitable to their needs. Co-ordination groups are non-governmental advisory committees which are sanctioned by the FCC, but which have no form of authority. In some cases they are volunteer bodies functioning on behalf of the various safety services, or they may be commercially oriented organisations functioning on behalf of business users.

There are no exclusive assignments as such, and applicants are required to share the available spectrum. The business band is the most congested, particularly in the larger urban areas; typical mobile channel loading in the Washington region is in the order of 60-70 units, and it is worse in other centers. Frequency co-ordination per se, is not required in the low and high VHF bands, hence the main problem in many areas is that of finding a spot where interference is apt to be acceptable.

When spectrum space was allocated for mobile use within the 806-947 MHz band, the Commission created a new eligibility class known as the Specialized Mobile Radio Systems (SMRS). Essentially this new class of operation is licensed, not as a common carrier, but as a private service. It is authorized to provide mobile facilities on a commercial basis to those who are normally eligible for licensing by the Safety and Special Services division. Entry is wide open in the sense that certification of public need is not a prerequisite to licensing. It is intended that the number of entrants will be limited by two factors: the market and the availability of frequencies. Primarily this type of licensing will be more appropriate for the new trunking systems which will be possible in the higher bands.

In summary, US safety and special service licensing policies which differ noticeably from those associated with the licensing of equivalent Canadian services include the following:

* the block frequency method of frequency allocation

* frequency selection and co-ordination is primarily the responsibility of the applicant, but it is generally handled by independent, non-government co-ordinating agencies.

* no frequency co-ordination is required in the business bands below 450 MHz.

* UHF-TV spectrum (Chs: 14-20, 475-512 MHz band) is being assigned for mobile use in 13 major US cities; in addition, an area within the 800 MHz region is also being allocated to Safety and Special Services.

* as opposed to the regional division of most licensing responsibilities in Canada, all except the general radio service applications are centrally processed from the Washington offices of the FCC.

7.3 Entry

Authority to operate equipment in one of the frequency bands subject to licensing by the Safety and Special Services Division is readily obtained. The primary requirement is that applicants be US citizens, American companies or government bodies eligible for licensing in one or other of the licensing areas available. Since assignments are not exclusive, and applicants for each service type must share the spectrum available to them, there is an "open" policy with regard to entry. The degree of usefulness of the radio service to the applicant will primarily depend on how many others may be sharing the same group of frequencies in the area concerned.

7.4 SAFETY & SPECIAL SERVICES - ENTRY CONTROL SUMMARY

A. REGULATORY INFLUENCES

Agency: FCC

a) DIRECT:

1) Ownership
2) Eligibility for licensing in a safety & special service category.

b) INDIRECT:

1) Availability of spectrum space.
2) Conformance with technical requirements.

B. NON-REGULATORY INFLUENCES

1) In congested areas, the identification of a frequency channel where loading conditions are acceptable.
2) Equipment, siting and installation costs.

COMMENTS: In the private field, entry is open to all applicants who have need of radio as an adjunct to their main line of business, and who are eligible for licensing in one or other of the Safety and Special Service categories. No exclusive assignments are available; the main problem in many instances is that of finding a clear enough frequency amongst the available channels.

7.5 SPECIALIZED MOBILE RADIO SYSTEMS (SMRS) - ENTRY CONTROL SUMMARY

A. REGULATORY INFLUENCES

Agency: FCC
(Safety & Special Services)

a) DIRECT:

1) Applicants need not be US citizens, but must not be agents or representatives of a foreign government.
2) Must comply with FCC technical requirements
3) Assignments limited to channels above 806 MHz

b) INDIRECT:

1) Install and commence operation within 8-12 month period.
2) Must load channel/s with subscribers within given period to avoid loss of channel, or need to share frequency with other operators.
3) If more than one channel required, system must utilize suitable trunking equipment to maximize channel usage.
4) Subscribers limited to those who would normally be eligible for licensing by safety & special services.

COMMENTS: Essentially similar to Canadian restricted common carrier license, but with less restriction from viewpoint of ownership and control. Treated as a private system authorized to function on a for-hire basis. No public need certification as in the case of normal US mobile common carrier services; has caused some problems with States which normally regulate common carrier communications services.

REFERENCES - COMMUNICATIONS

(1) Contact B-1

(2) Cable TV: A Handbook for Decision Making (1974) by:
W.S. Baer Published by: Crane, Russail & Co.

(3) Memorandum of evidence - Dr E.V. Rostow
CRTC Hearings Mar 1978: CN/CP vs Bell

(4) Contact C-14

(5) Contact C-15

(6) Federal Regulations Relevant to the Structural Development of Telecommunication Industries (Nov. 1977).
Published by: US Department of Commerce
Publication #: PB-275 238)

(7) Contact C-19

(C) Consultant's comments

APPENDIX - I

SUMMARY

OF

LICENSING PROCEDURES

Broadcast
Cable Television
Radio Common Carriers
Restricted/Mobile Common Carriers
Common Carriers
Private Services

LICENSING PROCEDURES - AM, FM, TV

CANADA	USA
1- Formal application made to CRTC for broadcast facility license	1- Applicant surveys program requirements in market area, then applies for an FCC Construction Permit. Local public notice is given of intent to establish a broadcast undertaking.
2- Simultaneously, application filed for Technical Construction and Operating Certificate	2- FCC issues public notice of application and delays action for 30 days. If no conflicts or valid protests exist, and all requirements are met, the Construction Permit is issued. OTHERWISE, public notification for a hearing is issued.
3- CRTC evaluate application following indication from DOC that the installation is technically acceptable	3- Upon completion of construction and equipment testing by the successful applicant, application is made to the FCC for a Broadcast Station License.
4- Notification of public hearing relative to the application published in the Canada Gazette	4- Station license and program test authority are issued.

License issued subsequent to CRTC's final decision as a result of the hearing/s.

COMMENTS: Essentially similar procedures are adopted on both sides of the border in the licensing of AM, FM & TV. In the US, public hearings are not mandatory if no objections or alternative applications are received within the cut-off period.

LICENSING PROCEDURES - RESTRICTED/MOBILE COMMON CARRIERS

CANADA - Restricted Common Carriers

1- Formal DOC application is filed together with technical brief covering proposed installation.

2- License is issued subject to technical acceptability and the availability of compatible frequencies in the area concerned.

USA - Mobile Common Carriers

1- Applicant first obtains certificate of public need for the proposed service from local or state authorities.

2- Applicant then submits formal application to the FCC providing both technical and financial information.

3- FCC issues public notification of application particulars, allowing 30 days for objections to be raised.

4- Subject to technical acceptability and absence of opposition to the application, a license is issued. In the event of opposition, public hearings are held.

NOTE: Canadian entry barriers are essentially limited to frequency considerations; US entrants in many areas must demonstrate public need for the services involved, and frequently encounter severe opposition from established operators.

LICENSING PROCEDURES - COMMON CARRIERS

CANADA

1- Application is made for a company charter. (Federal charters are required for inter-provincial operations, provincial charters for intraprovincial operations).

2- Application may then be made to DOC for the licensing of such radio services as may be consistent with the terms of the charter.

3- Rates and tariffs are then filed with the CRTC (or relevant provincial agency in the case of intraprovincial operations).

USA

1- Application is made to the FCC for section 214 certification (or its equivalent from state authorities in the case of intrastate services). If radio is involved, all applicants must also file for an FCC section 309 certificate.

2- If FCC application complies with rules, public notification is given in federal register. If no protests or other reasons exist for public hearing, 214 certification is granted.

OR, in the case of intrastate services, state administrations deal with certification processing in accordance with the applicable state regulations.

3- Rates and tariffs are then filed with the FCC in the case of 214 or 309 certification. Rates and tariffs are filed with state administration in the case of state certifications.

NOTE: Certification under Section 214 of the Communications Act of 1934 appears to be equivalent to a federal charter in Canada. State involvement in common carrier regulation at the state level varies, nevertheless each administration has the right to institute such rules and regulations as it sees fit with regard to intrastate activities.

LICENSING PROCEDURES - PRIVATE SERVICES (Business, Government, Safety, etc)

CANADA

1- Formal application to DOC for radio License

USA

1- Applicant selects (and co-ordinates where necessary) desired frequency in a band area where his particular type of service is licensable.

2- Formal application is submitted to the FCC for Radio License.

— — A STUDY INTO THE EFFECTS OF LICENSING ON INDUSTRY STRUCTURES: BACKGROUND REVIEWS.