



**DETAILS AND PRINCIPLES REGARDING PROPOSED
NAV CANADA CHARGES FOR AIR NAVIGATION SERVICES
1997**

1. GENERAL

This document (referred to as the Details and Principles Document) provides additional detail to expand upon the *Notice of New and Revised Service Charges* of May 29, 1997 (the "Notice"). Under Section 36 of the *Civil Air Navigation Services Commercialization Act*, S.C. 1996, c. 20 ("the *ANS Act*"), NAV CANADA is required to produce a document setting out additional details in relation to the proposed charges ("the Proposal") set forth in the Notice, including a justification of the fee proposal in relation to the charging principles established under Section 35 of the *ANS Act*.

This document sets out the following: (i) a general overview of NAV CANADA and its operations, (ii) the methodologies used in determining fees, (iii) exemptions from charges, (iv) terms and conditions for payment, (v) a justification of the proposed charges in relation to the charging principles set out in the *ANS Act* which govern NAV CANADA's imposition of new or revised charges, (vi) information regarding costs of services, (vii) information regarding the determination of charging units, (viii) additional information regarding the Proposal and how to make representations to NAV CANADA, and (ix) illustrations of various charges. A glossary of defined terms is found at the end of this document.

Section 36 of the ANS Act specifies that persons interested in making representations in writing to NAV CANADA with regard to the Proposal may do so by forwarding their submissions to the address set out in the Notice (see Section 9 of this document).

**2. NAV CANADA AND THE COMMERCIALIZATION OF THE
CIVIL AIR NAVIGATION SYSTEM**

NAV CANADA

NAV CANADA was incorporated on May 26, 1995, as a non-share capital corporation under Part II of the *Canada Corporations Act*, in order to acquire the Canadian civil air navigation system from the Government of Canada, and to own, manage, operate, maintain and develop that system. The head office of NAV CANADA is located in Ottawa, Ontario. NAV CANADA did not carry on a commercial business prior to its acquisition of the Canadian civil air navigation

system on October 31, 1996 (the "Transfer Date"). As a non-share capital corporation, NAV CANADA has members, rather than shareholders or other equity holders, comprising one member appointed by the Government of Canada, two members appointed by user groups representing commercial air carriers and business aircraft operators, and one member appointed by unions representing NAV CANADA's employees. The Corporation also has 126 non-voting associate members representing other aviation interests.

THE CANADIAN CIVIL AIR NAVIGATION SYSTEM

The air navigation system provides civil air navigation services to aircraft in Canadian sovereign airspace and international airspace for which Canada has air navigation services responsibility ("Canadian-controlled airspace"). These include air traffic control services, as well as aeronautical communication services, aeronautical radio navigation services, aeronautical information services, aviation weather services, emergency assistance services and flight information services. These services are delivered by approximately 6,300 employees from various facilities including seven area control centres, two terminal control units, 44 control towers, 83 flight services stations, a national headquarters and six regional offices which collectively support safe aircraft operations. Operators of almost all aircraft, whether carrying passengers or cargo, depend on the air navigation system for the safe and efficient movement of their aircraft.

THE CIVIL AIR NAVIGATION SERVICES COMMERCIALIZATION ACT

In order to facilitate the commercialization of the air navigation system, the *ANS Act* was enacted by the Parliament of Canada on June 20, 1996. The fundamental principles governing the mandate conferred on NAV CANADA by the *ANS Act* include the exclusive right to provide certain air navigation services, the ability to set and collect charges for the provision and availability of air navigation services, and the obligation of NAV CANADA to provide these services. Under the *ANS Act*, NAV CANADA has been granted the exclusive right and obligation to provide air traffic control, aeronautical information and specified flight information services in respect of Canadian-controlled airspace, subject to two limited exceptions. These exceptions relate to air traffic control services provided by the Department of National Defence ("DND") in respect of military aircraft and airspace controlled by DND, and air traffic control services provided at a small airport located at Portage-La Prairie, Manitoba. NAV CANADA is also authorized and required to provide, on a non-exclusive basis, aviation weather services, emergency assistance services, aeronautical communication services, aeronautical radio navigation services and all other flight information services, and to establish and maintain new radio navigation aids.

AIR NAVIGATION SYSTEM FUNDING

The air navigation system provides an essential service to aircraft flying through Canadian-controlled airspace. NAV CANADA intends to set rates of charges at levels sufficient to recover all costs (including debt servicing requirements and the repayment of principal), as determined in accordance with generally accepted accounting principles, to develop a contingency reserve for unforeseen events, and to maintain appropriate credit ratings. To this end, NAV CANADA has the ability to set and collect charges for air navigation services in accordance with the charging principles set out in the *ANS Act*.

The primary source of revenue for the air navigation system when operated by Transport Canada was the Air Transportation Tax ("ATT"). The ATT continues to be collected by air carriers from passengers at the time of ticket purchase as part of the ticket price. The Government of Canada will continue to impose and collect the ATT until the second anniversary of the Transfer Date, at which time its repeal will take effect. In addition to the ATT, Transport Canada levied North Atlantic and communications charges and, in November 1995, began levying overflight charges. These latter charges have been levied by NAV CANADA since the Transfer Date.

In conjunction with its acquisition of the air navigation system, NAV CANADA entered into an agreement with the Government of Canada (the "Transition Period Payments Agreement") which provides NAV CANADA with a fixed, pre-determined stream of monthly payments for the two year period following the Transfer Date. The *ANS Act* appropriates \$1.44 billion for payments to NAV CANADA during this two year transition period following the Transfer Date regardless of traffic levels, which payments are not subject to any risk associated with the collection of the ATT by the Government of Canada or the risk of Parliamentary appropriation.

The transition period payments are necessary because the overflight charges and NAT charges currently in effect will not generate sufficient revenues in order to cover all anticipated financial obligations of NAV CANADA in its first two years of operation. In addition, under the Master Trust Indenture, NAV CANADA has established a \$425 million Transitional Funding Reserve Fund and a \$630 million Capital Expenditure Reserve Fund.

Under the Transition Period Payments Agreement, NAV CANADA may, at its option, request that the Government of Canada reduce the amount of the transition period payments in the second 12 months of the transition period to a level below \$740 million in conjunction with a reduction to the ATT in a similar dollar amount. It is NAV CANADA's current intention, subject to the appropriate introduction of charges, to request a reduction in the amount of the transition period payments in the second 12 months of the transition period to \$370 million. Upon such a reduction being implemented, the Minister of Transport is obligated under the Transition Period Payments Agreement to recommend the implementation of corresponding reductions in the ATT.

THE TRANSFER AGREEMENT

On April 1, 1996, NAV CANADA entered into an agreement (the "Transfer Agreement") with

the Government of Canada to acquire the air navigation system for a purchase price of \$1.5 billion. The completion of the purchase was subject to the satisfaction of a number of conditions in favour of NAV CANADA including the completion of mutually satisfactory transfer and conveyance documentation, the obtaining of consents to the assignment of existing contracts relating to the air navigation system, the entering into of other contracts regarding the future operation of the air navigation system, and the arrangement of financing for the payment of the purchase price and the funding of certain other requirements. Closing of the transaction occurred on the Transfer Date.

ACCOUNTABILITY

NAV CANADA will ensure that system users are fully consulted before any material service realignments are undertaken. In northern and remote locations, service changes will occur only with the consent of the provincial or territorial governments, and a majority of the affected users, or through the direction of the federal government.

NAV CANADA is governed by a 15-member Board of Directors consisting of 10 directors nominated by stakeholders representing aviation users, bargaining agents, the federal government, 4 independent directors and the President & CEO. NAV CANADA also has an Advisory Committee elected by associate members, empowered to analyze and make reports and recommendations to the Board of Directors on any matter affecting the air navigation system.

The system of governance at NAV CANADA is the result of a unique corporate structure intended to make the company a self-sustaining commercial enterprise that is accountable to its stakeholders. By placing Canada's air navigation system in the hands of a non-share capital private sector corporation run by a diverse and representative board of directors, the following important goals are achieved:

- Since there are no shareholders, any surplus will not be distributed by NAV CANADA, but rather will be retained. NAV CANADA's central objective is the safe and efficient operation of the air navigation services as well as making needed technological improvements.
- The representative nature of the Board ensures a greater responsiveness in NAV CANADA operations than was possible when the air navigation system was part of government.
- As it was created by an Act of Parliament, it would take legislation to make any significant changes to the corporate structure or mission of NAV CANADA. Corporation by-laws related to governance and accountability can only be modified with the approval of, among others, the Minister of Transport.
- No single stakeholder group is in a position to dominate the Board of Directors.

NOTICE OF NEW AND REVISED SERVICE CHARGES

NAV CANADA needs to introduce charges over a two-year transition period ending October 31, 1998, to become financially self-sufficient. To facilitate the transition to fees, the

Government of Canada will continue to impose and collect the ATT and make transition payments to NAV CANADA. As fees are introduced, the ATT will be correspondingly reduced. NAV CANADA plans to phase in charges, commencing November 1, 1997.

In its Notice of May 29, 1997, NAV CANADA stated that it will be applying charges to the following categories of services: (i) oceanic; (ii) terminal, and (iii) en route, to overflights and flights departing from, and/or landing at, Canadian airports.

The Notice containing the Proposal consisted of six sections:

- (1) Proposed *Oceanic* charge
- (2) Proposed *Enroute* charges
- (3) Proposed *Terminal Services* charge
- (4) *Exemptions from Charges*
- (5) Proposed *Terms and Conditions of Payment* regarding charges
- (6) *Additional Information* regarding the Proposal and on *Making Representations* to NAV CANADA

Details on the Proposal set out in the Notice are provided in the subsequent sections of this document.

Note: All references to dollars refer to Canadian dollars.

3. METHODOLOGIES USED IN DETERMINING FEES

3.1 Oceanic Charge

- NAV CANADA currently levies two Oceanic charges – the North Atlantic Enroute Facilities and Services Charge (NAT) and the International Communication Services Charge (Int'l Comm).
- The NAT Charge is for air navigation services provided or made available by NAV CANADA or a person acting under the authority of the Minister of National Defence to an aircraft during the course of a flight in the Gander Oceanic Flight Information Region/Control Area (FIR/CTA). The existing charge is \$71.60 per flight.
- The Int'l Comm Charge is for air-ground radio frequencies provided or made available by NAV CANADA or by a person acting under the authority of the Minister of National Defence at one or more aeronautical stations to an aircraft during the course of an international flight, other than a flight between Canada and the continental United States, to obtain communication services. The existing charge is \$53.68 per flight.
- ***The NAT and Int'l Comm Charges will be merged into a single Oceanic Charge, effective November 1, 1997.***
- The Oceanic Charge will be for air navigation services, including air-ground radio frequencies to obtain communication services, provided or made available by NAV CANADA or a person acting under the authority of the Minister of National Defence to an aircraft during the course of a flight in the Gander Oceanic FIR/CTA.
- ***The proposed Oceanic Charge will be \$140.51 per flight.***
- Where in the course of a flight an aircraft lands or takes off from an airport in Canada located north of the sixtieth parallel of north latitude and lands or takes off from an airport in Greenland, the charge per flight will be 40% of the ~~above-proposed Oceanic e~~Charge otherwise payable.

- Table 1 presents the cost base for the Oceanic Charge, the number of estimated chargeable flights, the charge, and the estimated total charges from this source for the twelve month period beginning November 1, 1997 (hereinafter referred to as the “Test Year”).

Table 1 Calculating the Oceanic Charge for Test Year	
Cost base ¹	\$34.3 million
Number of Estimated Chargeable Flights (thousands) ²	239.5
Charge Effective November 1, 1997	\$140.51
Estimated Total Charges	\$33.7 million

Notes:

1. See Section 7 for information on the derivation of the cost base. The above cost base includes a reduction of \$3.6 million in respect of the proposal to merge the North Atlantic and International Communications Charges into a single Oceanic Charge.
2. Section 8 discusses how the chargeable flights have been estimated.

An illustration of the application of the Oceanic Charge is provided in Section 10.

3.2 Enroute Charges

- Enroute services are air navigation services other than terminal and oceanic services.
- Enroute charges are applied to flights in Canadian-controlled airspace (excluding the Gander Oceanic FIR/CTA), and cover enroute services provided or made available by NAV CANADA or by a person acting under the authority of the Minister of National Defence.
- Flights subject to the enroute charges include:
 - overflights - flights that pass through Canadian-controlled airspace (excluding the Gander Oceanic FIR/CTA) which do not land or take off in Canada, and
 - flights landing and/or taking off in Canada - any flight between two Canadian airports or between a Canadian airport and a foreign airport.
- Currently, only an overflight charge is levied.
- With respect to U.S. domestic overflights (e.g., Boston - Chicago, Anchorage - Seattle), the Proposal assumes that such flights would be charged the Overflight Charge for the distance flown through airspace where NAV CANADA provides air navigation services. This approach mirrors the application of the proposed U.S. overflight fee to Canadian domestic overflights (e.g. Montreal - Halifax, Toronto - Vancouver), as set out in the Interim Final Rule (IFR) published in the U.S. Federal Register on March 20, 1997, by the U.S. Department of Transportation. However, the IFR provided for time to consult on operational and other issues inherent in the U.S. proposal. Any changes in the NAV CANADA proposal that could result from the finalization of the IFR will be reflected in the final NAV CANADA Enroute Charges.

Charge Calculation

- The proposed enroute charges for a flight will be ~~the calculated as the~~ unit rates multiplied by the number of charging units ~~charging units for that flight~~.
- The number of charging units for each flight will be ~~calculated as~~ the square root of the aircraft weight expressed in tonnes multiplied by the distance in kilometres.
- For flights which remain entirely within Canadian-controlled airspace (excluding the Gander Oceanic FIR/CTA), distance is calculated as the great circle distance between the departure and arrival airports.
- For flights which enter or exit Canadian-controlled ~~air~~airspace (excluding the Gander Oceanic FIR/CTA), distance is calculated as the sum of the great circle distances of each leg of the flight in that airspace, based on the flight plan or position reports.

- Enroute distances will be reduced to take into account areas around both the arrival and departure airports in Canada in accordance with the paragraph below.
 - At airports where the Terminal Services Charge applies (refer to Section 3):
 - ~~At an airport where dedicated~~ If dedicated arrival/departure control services are provided, as indicated in Attachment I, the ~~re~~duction is 65 km (approximately 35 nautical miles);
 - If dedicated arrival/departure control services are not provided, ~~Otherwise~~, the ~~re~~duction for the airport is 35 km (approximately 20 nautical miles).
 - At ~~other~~ airports where the Terminal Services Charge does not apply, the ~~re~~duction is nil.

- For the purpose of calculating the charges, the following three methodologies may be used for determining the weight of an aircraft. The aircraft operator has a choice between the first two options; whereas the third option exists as a default method should the operator fail to provide the required information.

Provision of Information

At least one month prior to the start of each ~~-six-~~ month period, with the first period commencing on November 1, 1997, the aircraft operator must provide a fleet submission to NAV CANADA listing each aircraft expected to ~~transit be utilized in~~ Canadian-controlled airspace (excluding aircraft that transit only the Gander Oceanic FIR/CTA). The fleet submission must indicate the registration number and the maximum permissible take-off weight of each aircraft, as specified in the aircraft's certificate of airworthiness or in a document referred to in that certificate. In this fleet submission, the operator will be required to select either Option (1) or Option (2) below.

Options

- (1) The weight of an aircraft would be defined as the maximum permissible take-off weight of that aircraft, in tonnes expressed to the first decimal place, as stated in the fleet submission noted above; under this option, the operator must also include be sure to include the aircraft registration number in every flight plan.
- (2) The weight of an aircraft would be calculated as the average maximum permissible take-off weight of the aircraft of the same type utilized by the operator, in tonnes expressed to the first decimal place, as stated in the fleet submission noted above.
- (3) Where the fleet submission is not provided to NAV CANADA within the specified timeframe, or where under option (1) the aircraft registration number is not recorded on the flight plan, the weight of any aircraft utilized by the operator for a flight in Canadian-controlled airspace (excluding the Gander Oceanic FIR/CTA) will be the highest maximum permissible take-off weight for an aircraft of the same type.

- *The proposed Overflight Charge will be based on a unit rate of \$0.03263 per charging unit, increased from the existing unit rate of \$0.026142.*
- *The proposed Enroute Charge for flights either departing from or landing at a Canadian airport will be \$0.02174 per charging unit.*
- The Overflight Charge has a higher unit rate than the Enroute Charge applicable to flights landing or taking off in Canada because the latter category of flights will still be subject to the ATT while it is being phased out during the transition period (to November 1, 1998).

- Table 2 presents the Enroute Cost base, the number of estimated charging units, the unit charges and the estimated total charges from this source for the Test Year.

Table 2 Calculating the Enroute Charges for Test Year	
Cost base ¹	\$485.1 million
Number of Estimated Charging Units (millions) ²	11,405.7
Charges Effective November 1, 1997	
Overflights	\$0.03263
Flights Landing/taking off in Canada	\$0.02174
Estimated Total Charges	\$325.5 million

Notes:

1. See Section 7 for information on the derivation of the cost base. The above cost base includes \$3.6 million in respect of the proposal to merge the North Atlantic and International Communications charges into a single Oceanic Charge.
2. Section 8 discusses how the charging units have been estimated.

Illustrations of the application of the enroute charges are provided in Section 10.

Note: *The rate for flights landing and/or taking off in Canada will be less than the full cost recovery rate while the ATT is being phased out.*

The overflight rate will be higher than the rate for flights landing and/or taking off in Canada because overflights are not subject to the ATT. However, the rate applicable to overflights will be set at less than full cost recovery to phase in the charge.

3.3 Terminal Services Charge

- Terminal services are air navigation services provided or made available to an aircraft at or in the vicinity of an airport, excluding aircraft overflying the airport, such as i) dedicated arrival/departure control services provided by Area Control Centres and Terminal Control Units or ii) aerodrome services including, for example, airport advisories and air traffic control from a tower.
- The Terminal Services Charge will be levied for flights departing from airports with staffed air navigation facilities, i.e., airports with air traffic control towers, flight service stations (FSSs) or community aerodrome radio stations (CARS), whether the air navigation services are provided by NAV CANADA or by a person acting under the authority of the Minister of National Defence, except the airport located at Portage-La Prairie, Manitoba (hereinafter referred to as “Airports with Staffed Air Navigation Facilities”). Airports which currently meet this criterion are listed in Attachment I.

Charge Calculation

- The proposed Terminal Services Charge for a departure will be ~~is~~ the unit rate multiplied by the number of charging units for that departure ~~a given flight~~.
- The number of ~~€~~ charging units for each departure will be ~~calculated as~~ the aircraft’s weight expressed in tonnes raised to the 0.9₋power (i.e., weight^{0.9}) ~~for each departure~~.
- For the purpose of calculating the charge, the following three methodologies may be used for determining the weight of an aircraft. The aircraft operator has a choice between the first two options; whereas the third option exists as a default method should the operator fail to provide the required information.

Provision of Information

~~At least one month prior to the start of each six-month period, with the first period commencing on November 1, 1997, the aircraft operator must provide a fleet submission to NAV CANADA listing each aircraft expected to transit Canadian-controlled airspace (excluding aircraft that transit only the Gander Oceanic FIR/CTA). The fleet submission must indicate the registration number and the maximum permissible take-off weight of each aircraft, as specified in the aircraft’s certificate of airworthiness or in a document referred to in that certificate. In the fleet submission, the operator will be required to select either Option (1) or Option (2) below.~~
~~At least one month prior to the start of each six-month period, with the first period commencing on November 1, 1997, the aircraft operator must provide a fleet submission to NAV CANADA listing each aircraft expected to be utilized in Canadian-controlled airspace (excluding the Gander Oceanic FIR/CTA). The fleet submission must indicate the registration number and the maximum permissible take-off weight of each aircraft, as specified in the aircraft’s certificate of airworthiness or in a document referred to in that certificate. In this fleet submission, the operator will be required to select either Option (1) or Option (2) below.~~

Options

- (1) The weight of an aircraft would be defined as the maximum permissible take-off weight of that aircraft, in tonnes expressed to the first decimal place, as stated in the fleet submission noted above; under this option, the operator must also ~~be sure to~~ include the aircraft registration number in every flight plan.
 - (2) The weight of an aircraft would be calculated as the average maximum permissible take-off weight of the aircraft of the same type utilized by the operator, in tonnes expressed to the first decimal place, as stated in the fleet submission noted above.
 - (3) Where the fleet submission is not provided to NAV CANADA within the specified timeframe, or where under option (1) the aircraft registration number is not recorded on the flight plan, the weight of any aircraft utilized by the operator for a flight in Canadian-controlled airspace (excluding the Gander Oceanic FIR/CTA) will be the highest maximum permissible take-off weight for an aircraft of the same type.
- ***The proposed Terminal Services Charge, effective November 1, 1997, will be \$7.74 per charging unit.***

- Table 3 presents the Terminal Services Cost Base, the number of estimated charging units, the unit charge and the estimated total charges from this source for the Test Year.

Table 3 Calculating the Terminal Services Charge for Test Year	
Cost base ¹	\$429.0 million
Number of Estimated Charging Units (millions) ²	28.3
Rate Effective November 1, 1997	\$7.74
Estimated Total Charges	\$219.3 million

Notes:

1. See Section 7 for information on the derivation of the cost base.
2. Section 8 discusses how the charging units have been estimated.

Illustrations of the application of the Terminal Services Charge are provided in Section 10.

Note: *The rate will be less than the full cost recovery rate while the ATT is being phased out.*

4. EXEMPTIONS FROM CHARGES

- Certain categories of flights shall be exempt from air navigation services charges.
- Under Subsection 32(2) of the ANS Act, Air navigation services charges will not be imposed on:
 - a) A user who is a person acting under the authority of the Minister of National Defence;
or
 - b) A user in respect of a state aircraft of a foreign country, unless the foreign country has been designated otherwise by an Canadian federal Order in Council under Subsection 32(3) of the ANS Act.
- In addition, air navigation services charges will not apply in respect of the following flights:
 - i) Search and rescue flights operated under the direction of the Canadian Forces Search and Rescue Service;
 - ii) Flights operated for a registered charity within the meaning of the Income Tax Act (Canada) or equivalent foreign statute, proof of such status to be provided to NAV CANADA;
 - iii) Flights ~~performed by aircraft~~ of aircraft which the maximum take-off weight authorized of which, as shown in their certificate of airworthiness or a document referred to in that certificate, is 5.7 tonnes or less.

It should be noted that the proposed exemption for aircraft weighing 5.7 tonnes or less is provided as part of NAV CANADA's plan for developing charges for large aircraft in the first year of the transition period and for small aircraft in the second year.

5. TERMS AND CONDITIONS FOR PAYMENT

The following terms and conditions will be applicable regarding payment of charges imposed by NAV CANADA with regard to services:

- Remittances may be made in either Canadian dollars or U.S. dollars. U.S. dollars will be converted at the exchange rate for buying Canadian dollars on the day the remittance is deposited into a NAV CANADA bank account. Any material gains/losses will be credited/debited to the customer's account.
- All charges become due and payable on the thirtieth (30th) day after the date on which the invoice is issued in respect of the charges (the "due date").
- Invoices will be issued every month for flights occurring in the preceding month.
- When payment in full has not been received by the ~~thirtieth (30th) day after the~~ due date, interest shall commence being charged on the ~~thirty-first (31st) day after~~ day after the due date ~~the invoice was issued~~.
- Interest shall be calculated monthly on the outstanding amount, including principal plus any accrued interest.
- When a payment is made on an overdue account, the period for which interest is charged shall end on the day the payment is received.
- The interest rate shall be calculated on the basis of an annual rate of 18 per cent.
- Pursuant to Section 55 of the Act, the owner and operator of an aircraft are jointly and severally liable for the payment of any charge for air navigation services imposed by NAV CANADA.
- NAV CANADA may apply to the courts for an order authorizing the corporation to seize and detain aircraft in respect of unpaid and overdue charges. For Oceanic and Overflight Charges which are collected by the UK Civil Aviation Authority (the "CAA"), the CAA may seize and detain aircraft in respect of unpaid and overdue bills.

6. PRINCIPLES GOVERNING NAV CANADA'S USER CHARGES

The principles governing the establishment of new charges or the revision of existing charges by NAV CANADA are set out in Section 35 of the ANS Act. Each of the principles is presented below in italics, followed by a discussion of how the Proposal complies with that particular principle.

- 35 (1) (a) *Charges must be in accordance with a methodology established and published by the Corporation that is explicit and that also includes the terms and conditions affecting charges;*

The fee proposal Notice, required under Section 36 of the ANS Act has been placed on the Internet and sent to aviation associations. The Notice establishes the methodology for applying the proposed charges (oceanic, enroute and terminal) and the terms and conditions in respect of payment. On the basis of this information, any person subject to NAV CANADA's charges can calculate the amount payable for a given flight.

- 35 (1) (b) *Charges must not be structured in such a way that a user would be encouraged to engage in practices that diminish safety for the purpose of avoiding a charge;*

NAV CANADA's charges do not differentiate among the types of available services, apart from the distinction between terminal, enroute and oceanic services. For example, any flight involving an aircraft of a given weight above 5.7 tonnes between, say, Ottawa and Quebec City will be subject to the same Terminal Services Charge and Enroute Charge, regardless of whether the flight is IFR or VFR.

- 35 (1) (c) *Charges for the same services must not differentiate between domestic and international flights of air carriers;*

Pursuant to Subsection 35 (8), this charging principle only comes into effect in respect of enroute air traffic control services after the ATT has been eliminated. Therefore, it does not apply to NAV CANADA's Enroute Charges for the first year.

Notwithstanding the above, there is no differentiation in proposed charges between domestic and international flights.

- 35 (1) (d) *Charges for the same services must not differentiate among Canadian air carriers or among foreign air carriers;*

All Canadian and all foreign carriers are subject to the same Oceanic, Terminal Services and Enroute Charges for the same services.

During the first year, the Enroute Charges carry a higher rate for overflights than for flights landing or taking off in Canada because the flights touching down in Canada will still be subject to the ATT while it is being phased out during the transition period. Although, initially, there will be a difference in charges between these two types of flights, this will not result in charges being differentiated among carriers. Any two carriers will be subject to the same charge on overflights and the same charge on flights landing or taking off in Canada.

- 35 (1) (e) *Charges must differentiate between the provision of services in relation to the landing and take-off of aircraft and the provision of services in relation to aircraft in flight, and must reflect a reasonable allocation of the costs of providing the services in those circumstances;*

The Enroute and Oceanic Charges pertain to services made available or provided to aircraft in flight, whereas the Terminal Services Charge relates to services for aircraft arriving at and departing from an airport.

These charges are based on an allocation of costs among the three types of services. The rules for the attribution of costs to the services were arrived at by considering work loads, statistics based on activity reports, management judgment and ICAO guidelines.

The accounting firm of KPMG has provided an opinion to NAV CANADA that the allocation methodology adopted by NAV CANADA reasonably reflects the way in which services are provided, is consistent with approaches used by other air navigation service providers, and is appropriate for use as a basis for establishing the costs of these services.

A copy of this opinion is available upon request from NAV CANADA.

- 35 (1) (f) *Charges in respect of recreational and private aircraft must not be unreasonable or undue;*

During the first year, flights involving aircraft weighing 5.7 tonnes or less will be exempt from charges. NAV CANADA estimates that these flights represent approximately 85 per cent of all itinerant movements for private aircraft. Above the weight threshold, the charges will be the same as the charges applied to commercial aircraft. Recognizing that services are

similar for aircraft weighing more than 5.7 tonnes, whether private or commercial, NAV CANADA believes the charges are neither unreasonable nor undue for recreational and private aircraft.

- 35 (1) (g) *Charges for designated northern or remote services and for services directed to be provided under subsection 24(1) must not be higher than charges for similar services utilized to a similar extent elsewhere in Canada;*

Since NAV CANADA's Terminal Services, Enroute and Oceanic Charges are uniform throughout Canada, northern or remote services are subject to the same charges as services utilized elsewhere in Canada.

- 35 (1) (h) *Charges must be consistent with the international obligations of the Government of Canada;*

The most relevant international obligations are the Convention on International Civil Aviation of 1944 (the "Chicago Convention") and bilateral air services agreements between Canada and other states.

Article 15 of the Chicago Convention deals with air navigation system charges, and establishes the principle that fees charged for the use of airport and air navigation services not be higher for foreign compared to domestic users engaged in similar international air services. The fee proposal complies with Article 15 because: (i) the charges in respect of international air services are not higher for foreign air carriers than they are for Canadian carriers engaged in similar international air services (i.e., the charges do not differentiate according to the flag of the carrier), and (ii) the charges relate to the availability or provision of air navigation services and are not imposed for the right of entry into Canadian airspace.

The fee proposal is also consistent with bilateral air services agreements between Canada and other states: NAV CANADA's charges reflect a reasonable allocation of costs, and do not discriminate according to the flag of the carrier.

- 35 (1) (i) *Charges must not be set at a level that, based on reasonable and prudent projections, would generate revenues exceeding the Corporation's current and future financial requirements in relation to the provision of civil air navigation services.*

NAV CANADA's charges have been set to recover the corporation's costs, including expenses determined according to Generally Accepted Accounting Principles (GAAP) and the costs of complying with certain financial requirements, as described in detail in Subsection 35(5) below. The costs recovered through NAV CANADA's charges comply with the list

of eligible financial requirements in Subsections 35(5) and 35(6).

- 35 (2) *The charging methodology may recognize that the value of the services differs among users.*
- 35 (3) *Where the Corporation's charging methodology recognizes the value of the services and aircraft weight is used as a measure of the value of the services, the principle referred to in paragraph (1)(a) is deemed not to have been observed if aircraft weight is taken into account either directly proportionally or greater than directly proportionally.*

The Oceanic Charge is levied on a per flight basis and does not take weight into account.

The Terminal Services and Enroute Charges take weight into account, but less than proportionally. The Enroute Charges are based on a unit rate multiplied by the square root of aircraft weight multiplied by the distance in Canadian airspace. The Terminal Services Charge is the unit rate multiplied by aircraft weight raised to the 0.9 power.

- 35 (4) *For the purpose of subsection (3), "weight", in relation to an aircraft, means the maximum permissible take-off weight specified in the aircraft's certificate of airworthiness or in a document referred to in that certificate.*

Weight calculations will be based on the maximum permissible take-off weight specified in the aircraft's certificate of airworthiness or in a document referred to in that certificate. For more information, please refer to Section 3 of this document which describes the methodologies used in determining fees.

- 35 (5) *For the purpose of paragraph (1)(i), the financial requirements of the Corporation in relation to the provision of civil air navigation services include, without duplication, the Corporation's*
- (a) costs incurred before the transfer date,*
 - (b) operations and maintenance costs,*
 - (c) management and administration costs,*
 - (d) debt servicing requirements and financial requirements arising out of contractual agreements relating to the borrowing of money,*
 - (e) depreciation costs on capital assets,*
 - (f) financial requirements necessary for the Corporation to maintain an appropriate credit rating,*
 - (g) tax liability,*
 - (h) reasonable reserves for future expenditures and contingencies, and*
 - (i) other costs determined in accordance with accounting principles recommended by the Canadian Institute of Chartered Accountants or its*

successor,

to the extent that they relate to the provision of those services, less the amount determined in accordance with subsection (6).

- 35 (6) *The amount to be deducted for the purpose of subsection (5) is the aggregate of*
- (a) all grants, contributions and subsidies of a monetary nature received by the Corporation,*
 - (b) all transition period payments pursuant to section 98,*
 - (c) all interest income and investment income earned by the Corporation, and*
 - (d) all profits earned by the Corporation, other than in respect of the provision of civil air navigation services.*

Please refer to the discussion dealing with Subsection 35 (1)(i) of the ANS Act, and Section 7 of this document for more information on deriving the cost base.

- 35 (7) *Notwithstanding subsection (3), a category of users may be charged on a flat-fee basis, so long as the charge is otherwise consistent with the charging principles set out in subsection (1).*

During the first year, only the Oceanic Charge will be levied on a flat fee basis, and it is consistent with the charging principles set out in Subsection (1), as discussed above.

- 35 (8) *Paragraph (1)(c) does not apply in respect of charges for enroute air traffic control services for the period during which an air transportation tax is levied under the Excise Tax Act.*

Please refer to the discussion dealing with Subsection 35 (1)(c).

7. COST BASE FOR PROPOSED CHARGES

Charges need to be related to the cost of services. In developing the fee proposal for 1997, projected costs of \$788M for 10 months of NAV CANADA's fiscal year September - August 1996/97 were allocated to services. To estimate the cost base for individual charges for November 1, 1997 - October 31, 1998 (the "Test Year"), the per cent distribution of costs developed for 1996/97 was applied to the projected cost base for the Test Year.

7.1 Cost Allocation Methodology

The cost allocation methodology and related compilation of costs are summarized below. KPMG has provided an opinion to NAV CANADA that the allocation methodology adopted by NAV CANADA reasonably reflects the way in which services are provided, is consistent with approaches used by other air navigation service providers, and is appropriate for use as a basis for establishing the costs of these services. KPMG has also provided an opinion that the compilation of costs is in accordance with this cost allocation methodology.

7.1.1 Approach

An Activity Based Costing model was used to determine the full cost of NAV CANADA's three basic services:

- Enroute Services
- Terminal Services
- Oceanic Services

The model recognizes four Service Delivery Centres through which the services are provided:

- Towers
- FSS's
- ACC's/TCU's
- Maintenance, Communication and Engineering Services

A two step allocation process was used in most cases to determine the cost of each of the three basic services:

- Costs were allocated to the four Service Delivery Centres
- Service Delivery Centre costs were then allocated to the three services

The costs of some activities were allocated directly to the services, e.g., Meteorological reporting and forecasting ("MET services") provided by Environment Canada.

7.1.2 Cost Allocation Process

Financial projections of NAV CANADA expenses for 10 months of fiscal year 1996/97 served as the basis for allocation of costs.

The process which was followed in the compilation of costs was as follows:

- The key NAV CANADA activities were identified and the operating costs (resources) were attributed to these activities.
- These operating costs were attributed to the Service Delivery Centres by identifying the drivers which best explain how these resources are consumed. These drivers are operational in nature and wherever possible are capable of being measured. The drivers were identified through analyses, interviews, questionnaires, etc. An example of such an activity driver is the time spent by staff at FSSs in performing their principal activities. These time allocations are then used to attribute the operating costs at FSSs to the activities performed there.
- The costed activities of the Service Delivery Centres were attributed to the three air navigation services using activity/operational drivers, which again were derived from analyses, interviews, questionnaires, etc.
- A number of processes carried out at the Regional Offices or at Ottawa Headquarters support the Service Delivery Centres. These support processes that are not included in Service Delivery Centres include part of Air Traffic Services, Technical Services and Air Navigation System Requirements as well as the traditional head office processes of Finance, Legal, Information Management etc. These Non-Attributable Costs were allocated proportional to the directly attributed costs.
- The Ownership Costs of Assets (depreciation, amortization, and interest) are allocated to the services on the basis of the replacement costs of assets.

Table 4 provides a summary of the terminal/enroute split for major activities.

TABLE 4
TERMINAL/ENROUTE SPLIT OF MAJOR ACTIVITIES

<i>Allocation To Services</i>	<i>Terminal</i>	<i>Enroute</i>
<ul style="list-style-type: none"> • ACC's/TCU's <ul style="list-style-type: none"> • The oceanic portion of Gander ACC was determined based on the proportion of controller positions dedicated to oceanic control (51%) • The remaining portion of Gander, other ACC's and the TCU's was allocated to terminal services and enroute services based on the proportion of dedicated terminal controller positions. • Overall terminal/enroute split (excluding oceanic) 	25%	75%
<ul style="list-style-type: none"> • Towers 	100%	
<ul style="list-style-type: none"> • FSS's <ul style="list-style-type: none"> • Allocation to terminal, enroute and oceanic based on standard times for principal FSS activities and activity volumes • Overall terminal/enroute split (excluding oceanic) 	40%	60%
<ul style="list-style-type: none"> • Nav aids <ul style="list-style-type: none"> • Overall terminal/enroute split (excluding oceanic) 	65%	35%
<ul style="list-style-type: none"> • MET Services provided by Environment Canada <ul style="list-style-type: none"> • Allocation based on cost of principal functions and judgment consistent with ICAO guidance regarding the terminal/enroute split • Overall terminal/enroute split 	24%	76%

Terminal, Enroute and Oceanic Services accounted for 45.23%, 50.77% and 4% of the total cost, respectively.

7.2 Estimate of Cost Base for Test Year

The total cost base for charges is estimated at \$948.4 million. Applying the percentage distribution of costs for 1996/97 (10 months) referred to above, the estimated costs for the individual services for the Test Year are as follows:

TABLE 5				
ESTIMATE OF COST BASE				
FOR TEST YEAR				
(November 1, 1997 - October 31, 1998)				
Millions of \$				
	Terminal	Enroute	Oceanic	Total
Allocation Percentage 96/97	45.23%	50.77%	4.00%	100.00%
Cost Base	\$429.0	\$481.5	\$37.9	\$948.4

Note: The above enroute and oceanic costs do not reflect the inclusion of \$3.6 million of oceanic costs in the enroute category as a result of the proposed merger of the NAT and Int'l Comm charges.

8. DETERMINATION OF CHARGING UNITS

- Charging units are calculated for a base period (generally Nov. 1, 1995 to Oct. 31, 1996) and then forecasted forward to estimate charging units for the Test Year (Nov. 1, 1997 to Oct. 31, 1998).
- For the base period, information is obtained on every aircraft movement subject to charges in order to estimate charging units for each flight. The sum of the charging units across all of the flights determines the number of charging units for the base period.
- The Test Year forecast includes two adjustments compared to the base period:
 - traffic growth, generally 4 per cent over two years for domestic movements and 6 per cent over two years for transborder and other international movements,
 - 5 per cent contingency; this reduction in charging units helps ensure that NAV CANADA does not experience a shortfall in revenues during the Test Year when new systems are being established to capture billing information on each flight.

Oceanic Charge

- As discussed in Section 3.1, the Oceanic Charge will be levied on a per flight basis. Therefore, charging units are expressed as the number of flights.
- Billing information for the existing charges from NAV CANADA's Consolidated Flight Billing System (CFBS) indicates that for calendar year 1996 (the base period) 240K flights were subject to NAT charges.
- Charging unit estimates for Nov. 1997 to Oct. 1998 are 252K flights, after applying a 5 per cent growth factor. The 5 per cent contingency then reduces the estimate for the Test Year to approximately 240K flights.

Enroute Charges

- As discussed in Section 3.2, charging units for the Enroute Charges are calculated for each flight in Canadian-controlled airspace (excluding the Gander Oceanic FIR/CTA) based on the square root of the aircraft weight in tonnes multiplied by the distance in kilometres.
- Under contract with Statistics Canada, a database was developed which contains information on all aircraft movements at Airports with Staffed Air Navigation Facilities (except DND facilities) for the period November 1, 1995 to October 31, 1996, based on the NAV CANADA Aircraft Movements System (NCAMS). For each movement, the aircraft type was identified, as well as the departure and arrival airports, leading to the determination of enroute charging units for flights landing at Canadian airports.

- Within NCAMS, charging units were summed for every flight during the base period, after removing exempt flights (aircraft weighing 5.7 tonnes or less, DND and foreign state aircraft), to arrive at an estimate of 4.3B units.
- NAV CANADA currently has an enroute charge in place for overflights, with information on every billable flight captured in CFBS. Therefore, overflight charging units can be readily determined for the base period (calendar year 1996), and the figure is 7.1B units.
- The total charging unit estimate for Nov. 1997 to Oct. 1998 is 12.0B units, after applying appropriate growth factors (discussed above). This figure is then reduced to take into account the 5 per cent contingency, and the final estimate becomes 11.4B charging units for the Test Year.

Terminal Services Charge

- As discussed in Section 3.3, charging units for the Terminal Services Charge are expressed as $MTOW^{0.9}$ for each departure from an Airport with Staffed Air Navigation Facilities.
- As discussed earlier, the database developed from NCAMS contains information on flights at Airports with Staffed Air Navigation Facilities for the period November 1, 1995 to October 31, 1996. For each movement, the aircraft type was identified, leading to the determination of aircraft weight, and the calculation $MTOW^{0.9}$.
- For the base period (Nov. 1995 to Oct. 1996), the charging units were summed for every movement, after removing flights subject to exemptions. This resulted in the calculation of 28M charging units.
- The total charging unit estimate for Nov. 1997 to Oct. 1998 is 30M units, after applying growth factors of 4 per cent for domestic and 6 per cent for international and transborder movements to the base period. The application of the 5 per cent contingency results in a final estimate of 28M charging units for the Test Year.

9. ADDITIONAL INFORMATION REGARDING THE PROPOSAL AND HOW TO MAKE REPRESENTATIONS TO NAV CANADA.

This document is available in both on-line and hard copy versions. An electronic copy may be downloaded from NAV CANADA's internet site at <http://www.navcanada.ca>.

Hard copies of this document may be obtained by contacting NAV CANADA :

in writing: NAV CANADA by fax: (613) 563 -3426
 77 Metcalfe Street by telephone:1-888-762-8226

 Ottawa, Ontario

 Canada

 K1P 5L6

 Attention: Commercial Relations

Making written representations to NAV CANADA regarding proposed charges:

Pursuant to Section 36 of the *ANS Act*, persons interested in making representations in writing to NAV CANADA with regard to the Proposal may do so by writing to the following address:

NAV CANADA
77 Metcalfe Street
Ottawa, Ontario
Canada
K1P 5L6
Attention: Director, Rates and Revenues

The facsimile number for written representations is (613) 563 - 7994.

Note: Representations must be received by NAV CANADA by not later than the close of business (eastern standard time) on July 30, 1997.

10. ILLUSTRATIVE NAV CANADA CHARGES

(The following information is to assist the reader in understanding the application of the proposed charges, as set out in this Document).

Oceanic Charge (Section 3.1):

Effective November 1, 1997, the charge per flight will be \$140.51.

Enroute Charges (Section 3.2):

The charge is calculated as follows:

$$R \times W \times D$$

$$R = \text{unit rate}$$

$$W = \text{MTOW}^{0.5}$$

$$D = \text{distance expressed in km}$$

The weight factor (W) is calculated by taking the square root of the aircraft weight; for a more detailed discussion of the calculation of aircraft weight, please refer to Section 3.2.

The distance factor (D) is the great circle distance flown in Canadian-controlled airspace (excluding the Gander Oceanic FIR/CTA) in kilometres, net of reductions pertaining to terminal services, as set out in Section 3.2.

Effective November 1, 1997 the unit rate (R) will be \$0.02174 for flights either departing from or landing at Canadian airports and \$0.03263 for overflights.

Terminal Charges (Section 3.3):

The charge is calculated as follows:

$$R \times W$$

$$R = \text{unit rate}$$

$$W = \text{weight factor} = \text{MTOW}^{0.9}$$

The weight factor (W) is calculated by raising the aircraft weight to the power 0.9; for a more detailed discussion of the weight calculation please refer to Section 3.3.

Effective November 1, 1997, the unit rate (R) will be \$7.74.

ILLUSTRATIVE NAV CANADA CHARGES

TORONTO (YYZ) -LONDON, ENGL. (LHR) RETURN

B747

WEIGHT (MTOW) = 395.0 TONNES

DISTANCE = 2129 KM

(IN CDN CONTROLLED AIRSPACE EXCL. GANDER OCEANIC)

OCEANIC CHARGE:

CHARGE PER FLIGHT = \$140.51

return (x 2) = \$281.02

TERMINAL SERVICES CHARGE (Toronto):

UNIT RATE (R) : \$7.74

FORMULA R x W
 7.74 x 395.0^{0.9} = 7.74 x 217.2388 = **\$1,681.43**

ENROUTE CHARGE:

UNIT RATE (R) : \$ 0.02174

FORMULA R x W x D
 0.02174 x 395.0^{0.5} x (2129-65) = \$891.80

return (x 2) = \$1,783.60

TOTAL CHARGES (YYZ-LHR-YYZ) = \$3,746.05

ILLUSTRATIVE NAV CANADA CHARGES

VANCOUVER (YVR) - MONTREAL (YUL) RETURN

B767

WEIGHT (MTOW) = 141.0 TONNES

DISTANCE = 3679 KM

TERMINAL SERVICES CHARGE (Vancouver and Montreal):

UNIT RATE (R) : \$7.74

FORMULA	R	x	W			
	7.74	x	141.0 ^{0.9}	=	7.74 x 85.9601 = \$665.33	
			return (x 2)	=		\$1,330.66

ENROUTE CHARGE:

UNIT RATE (R) : \$ 0.02174

FORMULA	R	x	W	x	D	
	0.02174	x	141.0 ^{0.5}	x	(3679-130)	= \$ 916.17
					return (x 2)	= <u>\$ 1,832.34</u>

TOTAL CHARGES (YVR-YUL-YVR)		=				\$ 3,163.00
------------------------------------	--	---	--	--	--	--------------------

ILLUSTRATIVE NAV CANADA USER CHARGES

CHICAGO-PARIS (RETURN)

B747

WEIGHT (MTOW) = 395 TONNES

DISTANCE = 2247 KMS

OCEANIC CHARGE :

NAT/Intel Comm. charge (flat fee)

= \$140.51

return (x2) = \$281.02

OVERFLIGHT CHARGE :

UNIT RATE (R) : \$ 0.03263

FORMULA

$$R \times W^{0.5} \times D$$
$$0.03263 \times (395)^{0.5} \times 2247$$

= \$1457.20

return (x2) = \$2914.40

TOTAL ANS COSTS (ORD-CDG)

= \$3195.42

AIRPORTS WITH STAFFED AIR NAVIGATION FACILITIES¹

TOWERS

FSSs

CARS²

Atlantic

Gander
St. John's
Halifax *
Moncton

Charlo
Charlottetown
Deer Lake
Gander
Fredericton
Halifax
Saint John
St. John's
St. Anthony
Sydney
Wabush
Yarmouth

Québec

Dorval *
Mirabel *
Québec *
Sept-Iles
St-Honoré *
St-Hubert *
St-Jean *

Gatineau *
Gaspé
Iles-de-la-Mdeleine
Iqaluit
Kuujuaq
Kuujuarapik
La Grande Rivière
Mont Joli
Montréal (Drvl)
Québec
Roberval
Rouyn
Sept-Iles
Val D'Or

Broughton Is
Cape Dorset
Clyde River
Kimmirut (Lake Harbour)
Pangnirtung
Pond Inlet
Sanikiluaq
Eastmain
Waskaganish
Wemindji

TOWERS

FSSs

CARS²

Ontario

Buttonville *
Hamilton
London
North Bay
Oshawa *
Ottawa *
Sault Ste. Marie
Sudbury
Toronto LBPIA *
Toronto Island *
Waterloo
Windsor *

Kingston
London
North Bay
Sault Ste. Marie
St. Catharines
Timmins
Tor/Buttonville

Central

Regina *
Saskatoon *
St. Andrews *
Thunder Bay *
Winnipeg *

Baker Lake
Brandon
Churchill
Kenora
La Ronge
Prince Albert
Rankin Inlet
Regina
Resolute Bay
Saskatoon
Sioux Lookout
Thompson
Thunder Bay
Winnipeg Int'l

Coral Harbour
Gjoa Haven
Igloolik
Pelly Bay (Town Site)
Pepulse Bay
Taloyoak (Spence Bay)
Arviat (Eskimo Point)
Chesterfield Inlet
Whale Cove
Grise Fiord
Nanisivik

TOWERS

FSSs

CARS ²

Western

Calgary *
Edmonton Int'l *
Edmonton Mun. *
Springbank *
Villeneuve
Whitehorse
Yellowknife

Dawson Creek
Edmonton Intl
Ft. McMurray
Fort Nelson
Fort Simpson
Fort Smith
Fort St. John
Grande Prairie
Hay River
High Level
Inuvik
Lethbridge
Lloydminster
Medecine Hat
Norman Wells
Peace River
Red Deer
Springbank/Calgary
Whitecourt
Whitehorse
Yellowknife

Fort Liard
Wrigley
Fort Resolution
Aklavik
Fort McPherson
Paulatuk
Sachs Harbour
Tuktoyaktuk
Delene (Fort Franklin)
Fort Good Hope
Tulita (Fort Norman)
Cambridge Bay
Kugluktuk (Coppermine)
Holman
Beaver Creek
Burwash
Dawson
Faro
Mayo
Old Crow
Teslin
Watson Lake

Pacific

Abbotsford *
Boundary Bay *
Kelowna
Langley *
Pitt Meadows *
Prince George
Vancouver *
Vancouver Hr. *
Victoria *

Abbotsford
Campbell River *
Castlegar
Cranbrook
Kamloops
Nanaimo *
Penticton
Port Hardy
Prince George
Prince Rupert
Smithers
Terrace
Vict. Harbor *
Williams Lake
Vancouver

In addition to the airports listed above, Nav Canada will be extending a charge to civilian aircraft movements at certain aerodromes receiving ANS services from DND, including, but not limited to, the following:

Bagotville
Cold Lake
Comox
Goose Bay
Trenton

Notes:

1. The list was prepared in February, 1997 and may change before Terminal Services Charges are implemented on November 1, 1997.
2. Nav Canada funds ANS operations at the CARS airports (community aerodrome radio stations) under contract with the governments of Quebec, Northwest Territories and Yukon Territories.

At the airports marked with an asterisk (*), flights receive dedicated arrival/ departure control services.

GLOSSARY OF TERMS

Acronyms

ACC - Area Control Centre

ANS - Air Navigation Services

ATT - Air Transportation Tax

CAA - United Kingdom Civil Aviation Authority

CARS - Community Aerodrome Radio Station

CFBS - Consolidated Flight Billing System

CTA - Control area

FIR - Flight Information Region

FSS - Flight Service Station

IFR - Instrument Flight Rules

MET Services - Meteorological Services

MTOW - Maximum Permissible Take-off Weight

NAVAIDS - Navigational Aids

NCAMS - NAV CANADA Aircraft Movements System

TCU - Terminal Control Unit

VFR - Visual Flight Rules

Definitions

Air navigation services - Air navigation services means aeronautical communication services, aeronautical information services, aeronautical radio navigation services, air traffic control services, aviation weather services, emergency assistance services, and flight information services in respect of Canadian airspace or any other airspace in respect of which Canada has responsibility for the provision of air traffic control services.

Canadian controlled airspace - Canadian controlled airspace consists of Canadian sovereign airspace and international airspace for which Canada has air navigation services responsibility.

Designated Northern or Remote Services - Those services that are civil air navigation services designated by the Minister of Transport pursuant to section 2(5) of the Civil Air Navigation Services Commercialization Act.

Enroute charges - Charges applied to flights in Canadian-controlled airspace (excluding the Gander Oceanic FIR/CTA) , and covering enroute services provided or made available by NAV CANADA or by a person acting under the authority of the Minister of National Defence.

Enroute services - Enroute services are air navigation services other than terminal and oceanic services.

Great Circle - A circle on the surface of the earth, the plane of which passes through the centre of the earth.

Great Circle Distance - The length of the shorter arc of the great circle joining two points.

International Communication Services Charge (Int'l Comm) - A charge for the provision of services related to air-ground radio frequencies, provided or made available by NAV CANADA or by a person acting under the authority of the Minister of National Defence at one or more aeronautical stations to an aircraft during the course of an international flight, other than a flight between Canada and the continental United States, to obtain communication services.

Maximum permissible take-off weight - Maximum permissible take-off weight means the maximum permissible take-off weight specified in the aircraft's certificate of airworthiness or in a document referred to in that certificate.

North Atlantic Enroute Facilities and Services Charge (NAT) - A charge for air navigation services provided or made available by NAV CANADA or a person acting under the authority of the Minister of National Defence to an aircraft during the course of a flight in the Gander Oceanic Flight Information Region/Control Area (FIR/CTA).

Oceanic Charge - A charge for oceanic services.

Oceanic Services - Air navigation services, including air-ground radio frequencies to obtain communication services, provided or made available by NAV CANADA or a person acting under the authority of the Minister of National Defence to an aircraft during the course of a flight in the Gander Oceanic FIR/CTA.

Overflights -- flights that pass through Canadian-controlled airspace (excluding the Gander Oceanic FIR/CTA) which do not land or take off in Canada.

State aircraft - an aircraft other than an aircraft operated for commercial purposes, that is owned and operated by the government of a country or the government of a colony, dependency, province, state, territory or municipality of a country.

Terminal services - Air navigation services provided or made available to an aircraft at or in the vicinity of an airport, excluding aircraft overflying the airport, such as i) dedicated arrival/departure control services provided by Area Control Centres and Terminal Control Units or ii) aerodrome services including, for example, airport advisories and air traffic control from a tower.

Terminal services charge - A charge in respect of terminal services.

Test year - The twelve month period beginning November 1, 1997.

Transfer Date - The date provided for as the transfer date in the Agreement to Transfer between Her Majesty the Queen in Right of Canada and NAV CANADA. The transfer date is October 31, 1996.