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FCC 90-377

***1** In the Matter of
AMERICAN TELEPHONE AND TELEGRAPH COMPANY GTE HAWAIIAN TELEPHONE COMPANY, INC. MCI INTERNATIONAL, INC. TRT/FTC COMMUNICATIONS CORPORATION US SPRINT COMMUNICATIONS COMPANY LIMITED PARTNERSHIP WORLD COMMUNICATIONS, INC.
Joint Application for Authorization Under Section 214 of the Communications Act of 1934, as Amended to Construct. Acquire Capacity in and Operate a High Capacity Digital Submarine Cable System Between the United States Mainland and Oahu, Hawaii

File No. **I-T-C-90-081**

Adopted: November 8, 1990; Released: December 10, 1990

MEMORANDUM OPINION, ORDER

AND AUTHORIZATION

****7344** By the Commission:

1. The Commission has under consideration the above-captioned Joint Application filed on March 30, 1990, by American Telephone and Telegraph Company (AT & T), GTE Hawaiian Telephone Company Incorporated (HTC), MCI International, Inc. (MCII), TRT/FTC Communications, Inc. (TRT/FTC). [FN1] US Sprint Communications Company Limited Partnership (US Sprint) and World Communications, Inc. (Worldcom) (hereinafter collectively called the Joint Applicants). AT & T, on behalf of the Joint Applicants, filed updated Schedules B, C, and D to Attachment B of the application on August 17, September 14, and October 2, 1990. The Joint Applicants seek authority, pursuant to Section 214 of the Communications Act of 1934, as amended, 47 U.S.C. § 214, to construct and operate a high capacity digital optical fiber submarine cable system, extending between San Luis Obispo, California on the U.S. Mainland and Keawaula, Hawaii, the HAW-5 Cable System (HAW-5). HAW-5 will be jointly owned by twenty-three telecommunications administrations and carriers, including those representing 14 different foreign locations. The Joint Applicants propose that HAW-5 will be in service in January 1993.

2. The Joint Applicants also seek authority to: (1) acquire capacity in HAW-5; (2) acquire by lease such extension facilities as may be required to extend capacity in HAW-5; (3) activate and operate capacity in HAW-5 and the aforementioned extension facilities for the provision of their respectively authorized telecommunications services; and (4) convey to their correspondents or to nonowners, on an indefeasible right of user (IRU) basis, half-interests in certain capacity currently wholly assigned to a Joint Applicant to permit said IRU recipients to

provide their authorized services over HAW-5.

3. The Joint Application was placed on public notice on April 4, 1990. A petition to deny was filed by Pan American Satellite (PAS), and comments were filed by the State of Hawaii. AT & T and HTC, individually, filed reply comments in response to the State of Hawaii, and TRT/FTC filed a letter opposing PAS' petition. [FN2] The State of Hawaii filed responsive comments to AT & T's reply. The Department of Defense (DoD) also filed comments in support of HAW-5.

I. THE APPLICATION

4. The Joint Applicants will use HAW-5 to supplement their existing facilities in the provision of service that each applicant presently is furnishing or subsequently may furnish between the United States Mainland and Hawaii and international points. [FN3] HAW-5 capacity will be extended by suitable facilities to the borders of other countries participating in the HAW-5 cable system or to the terminals of other international communications systems, including other cable terminals and satellite earth stations. [FN4] Also, in Hawaii the HAW-5 Cable System will connect with suitable facilities which will provide access to the domestic networks of that state.

***2** 5. The Construction and Maintenance Agreement (C & MA) for HAW-5 was initialed on March 28, 1990. As defined in the C & MA, the cable system will consist of three segments. Segments A and C are, respectively, the cable stations at San Luis Obispo, California and Keawaula, Hawaii. Segment B consists of the whole of the submarine cable system provided between and including the System Interfaces at Segments A and C. [FN5] The System Interface is defined as the nominal 140 Megabits per second (Mbits/s) digital input/output ports on the digital distribution frame (excluding the digital distribution frame itself) where the 139,264,000 bits per second digital line section connects with other transmission facilities or equipment.

6. The HAW-5 Cable System to be supplied by AT & T will employ 1.55 micron laser technology operating at 565 Mbits/s on each working fiber pair. The capacity on each fiber pair is provided in four 140 Mbit/s streams, with each 140 Mbit/s stream containing 63 Minimum Investment Units (MIU) and each MIU consisting of a 2.048 Mbit/s bit stream containing 30 MAUOs. [FN6] The transpacific capacity of HAW-5 (Segment B) will be 252 MIUs (7560 MAUOs) per fiber pair, for a total capacity 504 MIUs (15,120 MAUOs), or twice the capacity of the HAW-4/TPC-3 Cable System. For voice services, circuit multiplication equipment can be employed to derive approximately 150 virtual voice paths from a MIU.

7. The estimated total costs of the HAW-5 system and the estimated Joint Applicants' combined share of the capital costs associated with each subsegment of the cable are as follows:

****7345** HAW-5 Cable System Estimated Costs

Segment	Total Cost (Millions)	Combined Applicants' Share (Millions)
Segment B (Total Transmission Portion)	$193.0	$151.8
Segments A and C (Cable Stations)	6.0	4.7
TOTAL	$199.0	$156.5

The estimated costs do not include interest during construction, which the Joint Applicants estimate to be approximately $2.2 million. The Joint Applicants estimate that the original capital cost of a 64 Kbit/s half-circuit (half-MAUO) in HAW-5 will be $6,400. The application states that the cost of circuit multiplication equipment, which is not considered a part of the cable system, will be added as needed to serve future demand. About 85 percent of the costs of Segment B of the HAW-5 Cable System will be on a fixed price basis, and the remaining 15 percent of the cost will be on a cost-incurred basis. Items such as the submarine cable, the repeaters, the terminal transmission equipment and the high voltage power plant will be furnished on a fixed price basis. Items such as the cable laying, route survey, plowing and burial of the cable, project management, owners' inspection and amounts payable for customs duties and value added taxes will be handled on a cost-incurred basis.

***3** 8. As indicated in Appendix 1, the Joint Applicants' collective voting interest in HAW-5 is 78.67%. Appendix 2 shows ownership interests and allocation of capital, operating and maintenance costs of Segment B, and the allocation of capital, operating, and maintenance costs of Segments A and C. Appendix 3 (Schedule D of the C & MA) shows the capacity in HAW-5 that is assigned to each of the owners, upon which the costs are based. HAW-5 capacity assignments are based on the forecasted demand of each of the Joint Applicants. The assignments contemplate each Joint Applicant's proposed use of circuit multiplication equipment. Both prior and subsequent to the System Ready for Service (RFS) date (first quarter 1993), carriers, including non-owners of HAW-5, may acquire HAW-5 capacity on an IRU, lease or other mutually agreed upon basis.

9. The Joint Applicants state that HAW-5, via interconnection with the Pac-RimEast, Tasman-2, and PacRimWest cable systems, will improve digital restoration capabilities. [FN7] HAW-5 and connecting cable systems would provide the capability to utilize digital common carrier cable facilities for restoration of HAW-4/TPC-3 or TPC-4 and will enhance service reliability by providing multiple digital transmission paths to minimize the number of circuits affected by a service interruption. The Joint Applicants also note that many customers, especially those involved with data transmission, are becoming increasingly sophisticated and insist upon digital submarine cable back-up for their private networks and other custom services.

10. The Joint Applicants also state that HAW-5 will satisfy the operational requirements of DoD in the POR by providing additional necessary submarine cable capacity, media and path diversity, and redundancy. The Joint Applicants assert that HAW-5 will benefit the U.S. economy generally, and the U.S. submarine cable industry specifically, by promoting a leadership role for U.S. industry in lightwave submarine cable system technology, and will also promote international comity. They note that the new 1.55 micron technology utilized for HAW-5 will also provide significant economies.

II. DISCUSSION

11. The Joint Applicants seek authority to construct and operate the digital HAW-5 cable system to begin service in early 1993 to meet their telecommunications capacity needs and those of their correspondents in the POR during the 1993-2005 time frame. We have reviewed the Joint Application under the public convenience and necessity standard of Section 214 of the Communications Act of 1934, as amended, as well as PAS' petition to deny and the comments and reply comments filed by the State of Hawaii, DoD, the Joint Applicants, HTC and TRT/FTC. We conclude that implementation of the HAW-5 Cable System in 1993 will serve the public interest, and certify that the public convenience and necessity require the construction and operation of HAW-5 as described herein. Accordingly, we grant the Joint Application subject to certain conditions. [FN8]

***4** A. The Need for the HAW-5 Cable System

12. Section 214 of the Communications Act requires that the Commission make a finding that the public convenience and necessity will be served by authorization of the facilities requested in the Joint Application. The standard we employ is "whether the specific facility chosen and the use to be made of that facility are required by the public convenience and necessity." [FN9] In making this determination, we traditionally have considered such factors as demand, cost, media and route diversity, restoration, intramodal and intermodal competition, technological innovations and international comity. [FN10] We will consider these factors here, as well as those issues raised in response to the Joint Application.

1. Demand and Capacity

13. Under the traditional form of demand analysis that we have applied in authorizing the construction and operation of submarine cable systems, we conclude that projected circuit demand, along with other factors, supports the operation of HAW-5 in 1993 to meet the telecommunications needs of the Joint Applicants and their correspondents in the POR during the 1993-2005 time frame.

14. The State of Hawaii asserts that the Commission should not authorize new facilities for the POR absent a convincing showing on the record that existing facilities are or will be fully, effectively and efficiently utilized and that any

proposed new facilities are genuinely needed to meet realistically projected user demand and cost/rate effectiveness. According to the State of Hawaii, the Joint Applicants failed to address entirely the subject of user demand and related cost/rate effectiveness. Should the Commission authorize the proposed HAW-5 cable facilities without such evidence, the State of Hawaii asks that the Commission determine that costs allocated to Hawaiian points will be pooled for ratemaking purposes with costs allocated to other U.S. points, particularly the Mainland. The State of Hawaii alleges further that the public interest criteria addressed by the Joint Applicants are mostly unrelated to consumer effects and there is no demonstration that the proposed facilities can provide services not currently available. The State of Hawaii also ****7346** notes that although the Joint Applicants describe capacity as " fully subscribed", there is no data showing current utilization and traffic on existing submarine cable or satellite facilities, projected utilization by type of facility or the basis for such projections.

15. The Joint Applicants assert that HAW-5 is justified on the basis of user demand and documented by the proprietary demand forecast and Circuit Activation Plan data submitted separately by AT & T and the other Joint Applicants under confidential cover as part of the application. They state that these data, based on current information, support the necessity of having HAW-5 operational in 1993. The Joint Applicants note that data describing usage is already available for all existing Pacific cable and satellite facilities through monthly Circuit Status Reports filed with the Commission. [FN11] Moreover, they state that user demand is determined not only by the need for raw transmission capacity, but also by such user requirements as digital technology, route and media diversity, digital cable restoration capability, security and cost-effectiveness. However, the State of Hawaii believes that where unique requirements exist, such as demanding service by a specific mode of transmission, the user with the special requirements (technological, diversity or security related) should bear the differential in cost for such custom facilities and services.

***5** 16. We disagree with the State of Hawaii that there is insufficient information on capacity and demand to evaluate the HAW-5 application. The capacity available to the Joint Applicants on HAW-4 is publicly available information. In addition, the Joint Applicants have provided their forecasted circuit demand for HAW-5, under requests for confidentiality. We have reviewed the data provided by the Joint Applicants and conclude that HAW-5 is justified on the basis of demand. Based on this information, it does not appear that there will be adequate capacity available on existing and planned common carrier facilities to accommodate forecasted demand. HAW-5 has a total capacity of 15,120 MAUOs. By 1993, the proposed in-service date of HAW-5, the Joint Applicants project a need for 3368 MAUOs via HAW-5, which is 22.3% of its total capacity. The Joint Applicants project that use of HAW-5 will increase to 49.9% of the cable's capacity by 1997, the cable's fifth year of operation. HAW-4 will not have sufficient capacity available to accommodate this demand. By early 1990, the Joint Applicants project

that HAW-4's idle capacity will be 1235 MAUOs. Even if 1235 MAUOs on HAW-4 were still available in 1993, there would still be insufficient capacity to meet the Joint Applicants' demand for digital fiber optic cable facilities. Moreover, HAW-4 is fully subscribed and use of its capacity to meet demand projected for HAW-5 would in all likelihood require foreign administrations to surrender their interests in order to allow service to other locations. In light of these circumstances, we find that the introduction of HAW-5 is needed to meet the Joint Applicants' demand for digital fiber optic cable facilities during the 1993-2005 time frame.

17. Having determined that the construction and operation of the HAW-5 Cable System is justified based on demand, we need not consider the State of Hawaii's suggestion that, in the absence of demand justification, we determine that the need for the facilities is based solely upon national interests and that the cost of such facilities not be used to justify rate increases or to delay rate reductions for Hawaiian points as compared to points in the continental United States.

18. Presence of Other Facilities. In considering the demand for the HAW-5 Cable System, the State of Hawaii believes that the Commission should take into account the presence of other facilities, both private and common carrier. In particular, the State of Hawaii cites pending applications for US Sprint's "Hawaii Fiber Optic-1 Cable", Transnational Telecom, Ltd.'s "Aloha Cable", the proposed Pac-RimEast submarine cable, and the recently authorized TPC-4 and PPAC POR cables. The Joint Applicants note that the Commission has held that private cables are not substitutes for other common carrier facilities. With respect to common carrier facilities, the Joint Applicants state that each of the proposed facilities will be considered in an appropriate Section 214 proceeding. The State of Hawaii believes that acceptance of the Joint Applicants' position would encourage "piecemeal" consideration of new facilities without an overview. According to the State of Hawaii, such an approach would lead to excessive investments and duplication of user demand. In support of its position, the State of Hawaii points to HTC's decision to invest in HAW-5 to interconnect with the North Pacific Cable (NPC), a private facility. The State of Hawaii views this arrangement as indicative of the extent of interaction among cable facilities in the POR that have not been properly reviewed by the Commission.

***6** 19. We disagree with the State of Hawaii's suggestion that other private cable facilities should be taken into consideration in determining whether the HAW-5 cable system is justified. We have previously addressed and rejected this argument in considering applications for new common carrier cable facilities. In those instances, we determined that private cables would compete with, and not supplant, common carrier facilities. [FN12] Moreover, we have held that private cables are risk ventures which shall succeed or fail on their own merits and not through Commission action that would guarantee common carrier use. [FN13] We hereby reaffirm our previous decisions on this issue.

20. We also disagree with the State of Hawaii's suggestion that other common carrier facilities have not been considered. The State of Hawaii's argument that the Commission must conduct an "overview" of facilities is essentially a request to reinstate the facilities planning process in the POR. As noted in paragraphs 41-43, infra, we have determined that a facilities planning process is no longer necessary as a basis for determining the need for and timing of new common carrier facilities. In the absence of such a process, the need for additional common carrier facilities is considered in the context of a Section 214 application proceeding. In this proceeding, we have taken into account other common carrier facilities in determining that there is a need for the HAW-5 Cable System. Moreover, as noted below, we believe the competitive environment and new regulatory approaches are sufficient to guard against imprudent investment in unnecessary facilities.

21. The Effect of Price Caps Regulation. In addition to the showing of demand, current competitive conditions and regulatory approaches provide the Joint Applicants with the incentive to make rational economic decisions and not engage in unnecessary construction of facilities. [FN14] In light of these factors, we noted in authorizing the construction of the TPC-4 cable system that we are now ****7347** able to give the Joint Applicants wider latitude in determining what facilities to construct and when to place such facilities in service. [FN15]

22. The State of Hawaii questions the effectiveness of price caps regulation in preventing unnecessary investment since it is only applicable to AT & T [FN16] and because it believes that the Joint Applicants have every incentive to invest in new submarine cable facilities before the next review of price-capped rates or rate-of-return regulated rates. By investing now, the State of Hawaii asserts, AT & T can have these costs and investments added to its investment and cost base to justify the next generation of price caps. Thus, it views price caps regulation as having the same characteristics as rate-of-return regulation. Further, the State of Hawaii alleges that AT & T's recently capped international rates were never appropriately justified or examined on the basis of a Commission prescribed rate of return.

***7** 23. We disagree with the State of Hawaii's view of price caps regulation. In our TPC-4 Decision we stated that the price caps system of regulation is a disincentive for carriers to engage in the construction of unnecessary facilities since the burden of such investment would fall on stockholders and not ratepayers. [FN17] The same rationale is equally applicable here. AT & T is effectively restrained under price caps regulation from imprudent, unnecessary investment. The State of Hawaii's contention that price caps regulation provides AT & T with incentive to invest in new submarine cable facilities before the next price caps review is based on the faulty premise that such investment would be "rubber stamped" without appropriate review.

24. There is also no basis for questioning the efficacy of price caps regulation

because it is not applicable to all of the Joint Applicants. We note that, with the exception of HTC, the remaining co-owners of the HAW-5 cable system are classified as non-dominant, which means that they do not possess market power. Thus, any investment in unnecessary facilities would require them to be able to raise rates to recoup such investment. As a result, any non-dominant carrier that raises rates above those set by the marketplace to recover imprudent investments risks the loss of potential customers. [FN18] Finally, we note that this proceeding is not the proper vehicle for considering the State of Hawaii's suggestion that AT & T's recently capped international rates were never properly justified on the basis of a Commission prescribed rate of return.

25. The State of Hawaii also asserts that international rates are not yet wholly integrated with those of the rest of the United States and, since it has not had access to the Joint Applicants' demand forecasts, it fears that Hawaii may suffer the effect of disproportionate cost distribution from these facilities. The Joint Applicants assert that the State of Hawaii's comments on ratemaking are inappropriate in a Section 214 authorization. They suggest that if the State of Hawaii feels special regulatory mechanisms are appropriate for Hawaii, it should pursue this through a rate proceeding. We agree. The State of Hawaii has not demonstrated that either current international rates are biased against Hawaii or that future rates may be biased because of unnecessary investment. The State of Hawaii's concern in this regard is based on its belief that the HAW-5 Cable System is not justified based on demand. As noted above, we believe that the State of Hawaii's concerns regarding unnecessary investment in the HAW-5 cable system are unfounded in light of the demonstrated demand for the cable system, the existence of a competitive marketplace and current regulatory approaches. Any further concerns regarding rate integration are best addressed in the context of a rate proceeding. [FN19]

2. Quality of Service

26. Media and Route Diversity. We previously have found that increasing media and route diversity to strengthen service reliability is of decisional significance in our public interest determination to authorize the construction of transoceanic facilities. [FN20] Media diversity enhances service reliability through the use of more than one transmission medium, satellite or cable, to carry a correspondent's traffic. As a result, an increase in media diversity protects against the systemic failure of one medium. Route, or path, diversity enhances service reliability by increasing the number of independent routes that carry traffic to a given location. It is closely related to the ability to restore circuits in case of a facility failure. As a rule, the more independent routes serving a given location, the greater the ability to restore one that fails. Thus, an increase in route or path diversity is the natural consequence of the introduction of another facility into a region.

***8** 27. DoD supports the construction of the HAW-5 cable based on its view that

maximum possible diversity and redundancy of transmission paths are essential to providing the necessary degree of connectivity and survivability (i.e., security) of DoD and other critical U.S. Government and private sector communications. DoD emphasizes that minimizing the number of circuits affected by the failure of a particular medium or route is extremely important from a national defense and security standpoint. DoD also states that service reliability during the period after a facility failure and before restoration is extremely important from a national defense and security standpoint. The Joint Applicants cite the advantages of an overall integrated network system as opposed to treating particular transmission equipment as merely a point-to-point facility. They state that multiple paths via each medium will allow for a fully integrated and highly reliable network.

28. We conclude that the introduction of HAW-5 as proposed will enhance both media and route diversity. HAW-5 will enhance route diversity by adding another independent route with respect to the cable as well as landing points in California and Hawaii. Moreover, route or path diversity will be enhanced between the United States and New Zealand, Australia, Japan and Southeast Asia, in that HAW-5 and connecting cable systems will provide a separate transpacific route south of the HAW-4/TPC-3 and TPC-4 cable systems. Service reliability would be improved since the number of circuits affected by a service interruption on a particular route or routes would be minimized and the ability to restore the failed facility via another digital cable facility would be enhanced.

29. With respect to media diversity, as of December 31, 1989 the Joint Applicants were providing a total of 2829 circuits, consisting of 998 submarine cable and 1831 satellite circuits to the countries and territories initially proposed to be served by HAW-5. Thus, a failure of satellite facilities could significantly disrupt services in the region. While the Commission has never specified what a preferable cable/satellite ratio would be, it is clear that the addition of the HAW-5 capacity would minimize the impact ****7348** of a failure of satellite facilities in the region by reducing the current imbalance in favor of satellite facilities.

30. Restoration. Restoration pertains to the ability to maintain service in the event of a facility outage. The Joint Applicants state that HAW-5 will provide restoration capability for POR facilities in general, and particularly the digital HAW-4/TPC-3 Cable System. Restoration of HAW-4/TPC-3 currently is occurring through the use of INTELSAT capacity. However, the Joint Applicants state that there is insufficient satellite capacity to restore HAW-4. In addition, they note that many customers, especially those requiring data communications, are becoming increasingly sophisticated and are insisting on digital cable backup for their private networks and other custom services. The State of Hawaii questions the Joint Applicants' assertion concerning the lack of satellite capacity to restore HAW-4, noting that no data was provided to justify the claim. The State of Hawaii also notes that if every cable and satellite facility can be justified on

the need for additional restoration capacity, there will be a never ending justification for new facilities without regard to demand.

***9** 31. We find that HAW-5 will provide restoration capabilities that currently are unavailable by allowing for digital cable restoration via a self-healing (self-restoration) design that has a stand-by transmission path for the entire route across the Pacific and uses redundant equipment for automatic protection switching. Although the Commission has previously recognized that satellite capacity provides a satisfactory restoration alternative for cable, we also have recognized that absolute reliance on satellite facilities to meet restoration needs and increased demand may not be in the best interests of users that may have specific communications requirements that may best be accommodated by fiber optic cable facilities. [FN21] In light of the increasing reliance on digital facilities we find that it is reasonable for the Joint Applicants to seek an alternative cable route to prevent placing all of their forecasted cable demand on a single digital cable system. Service reliability would also be enhanced since an additional digital fiber optic cable route would be available for restoration of those digital services disrupted by an outage. Moreover, the fact that all of the services would not be on a single digital cable facility would lessen the impact caused by a service disruption on a similar facility.

3. Cost Analysis

32. The Joint Application estimates the total cost of HAW-5 to be $199.0 million, with the Joint Applicants' share to be $156.5 million. In addition, it estimates that interest during construction will be $2.2 million. The estimated original capital cost of a 64 Kbit/s half-circuit (half-MAUO) is approximately $6,400. [FN22] The Joint Application notes that the unit cost of a virtual voice channel in HAW-5 will be further reduced through the addition and use of digital circuit multiplication technology, which can derive nominally 150 virtual voice channels from a MIU (30 MAUOs).

33. The State of Hawaii questions the adequacy of the cost information filed in the Joint Application. It asserts that the "original capital cost" per channel is of questionable validity in light of a history of inaccuracies in such projections. In addition, the State of Hawaii notes that the figures do not relate to revenue requirements per channel utilized and the Joint Application does not contain any analysis regarding channel utilization, the impact of early obsolescence and the potential for accelerated depreciation of existing facilities.

34. The Joint Applicants state that they have provided the requisite cost information, including a break down of costs for each system subsegment, underseas portion, cable station portion, percentage fixed price, percentage cost-incurred price, and unit cost. With respect to the State of Hawaii's question regarding the credibility of the original capital cost for half-MAUOs, the Joint Applicants assert that these costs were taken directly from the official HAW-5 financial re-

cords which reflect the best information available to the HAW-5 owners. They also note that there is no reason for them to go beyond the customary level of detail, particularly considering the Commission's recent statement that the detailed analyses of facility costs traditionally undertaken are no longer necessary in the present price caps environment. [FN23]

***10** 35. We find that the cost information contained in the Joint Application is sufficient to allow a determination on the need for the HAW-5 Cable System. The cost data submitted is similar in type to cost data previously submitted and accepted in other cable construction applications. In those cases, the cost data was found to be sufficient, and nothing has changed in the interim to warrant the submission of more detailed cost information. Accordingly, we reject the State of Hawaii's suggestion that the Joint Applicants' cost information should also include revenue requirements per channel utilized and an analysis of such factors as channel utilization, the impact of early obsolescence and the potential for accelerated depreciation of existing facilities. Moreover, the State of Hawaii's insistence on additional and more specialized cost data runs contra to recent Commission statements that analysis of such cost data need not be as detailed in a price caps environment. [FN24] We also find that the State of Hawaii has provided no basis for questioning the validity of the original capital cost of a half-MAUO in HAW-5. Although the State of Hawaii refers to a "history" of inaccuracies in such projections, it has failed to provide any evidence for doubting the accuracy of cost estimate contained in the instant application. Absent any evidence that the HAW-5 financial records do not accurately reflect the cost of the system, we find no reason to question the validity of the cost information extracted therefrom.

4. Technological Innovations

36. In determining the need for additional facilities in a region, the Commission typically considers to what extend the proposed facilities will introduce new technology. In some instances, the effect of introducing new technology in the region is compelling, such as introducing digital fiber optic technology for the first time. In other cases, the technological innovations may not be as significant, such as improvements in laser technology in an area where digital fiber optic technology is already available. The technological advances made possible by HAW-5 involve both. Insofar as purely domestic service is concerned, HAW-5 will introduce AT & T's latest 1.55 micron laser and 565 Mbit/s technology to the POR. The 1.55 micron technology reduces the number of repeaters that would have been required with 1.3 micron laser technology. The reduced number of repeaters, in turn, results in cost savings to the HAW-5 Cable System. With respect to international service to Australia and New Zealand, we note that HAW-5 will interconnect with the PacRimEast ****7349** cable to provide the first digital fiber-optic submarine cable capability directly linking the United States to these countries. Thus, it will be responsible, in part, for introducing digital fiber optic technology to these locations. In light of these factors, we find that HAW-5

will serve the public interest by introducing new technology insofar as its international uses and providing further advancements in digital fiber optic technology in its domestic applications.

***11** 5. Competition Considerations

37. Intermodal and Intramodal Competition. We previously have recognized that enhancing both intermodal and intramodal competition can be expected to spur providers of both international satellite and cable services to keep their services innovative and their prices low. [FN25] We find that introduction of HAW-5 will enhance intramodal competition in the POR and encourage both private and common carrier cable operators to innovate and price their offerings in a manner that is calculated to attract and retain customers. We also find that introduction of HAW-5 will increase intermodal competition with INTELSAT and potential separate satellite system providers and thereby spur existing providers of both cable and satellite capacity to respond competitively. Such competition will give service providers and other users greater choice in selecting facilities and thus will enable them to maintain, or improve and enhance, the economy and efficiency of their operations. The opportunity to choose among a range of facilities further allows service providers to be more responsive to customer needs in terms of price, service quality, and service availability.

38. Competitive Procurement. Although the State of Hawaii acknowledges that there may not be a reason to impose a particular procurement scheme on the Joint Applicants, it states that the Joint Applicants have failed to disclose the procurement practices they intend to use. The State of Hawaii argues that information on procurement practices is necessary in this instance because 85 percent of the costs of Segment B will be on a fixed price basis. Specifically, the State of Hawaii believes that to give meaning to fixed-price contracts, the Commission must ensure that both the prime contracts and subcontracts for engineering, manufacturing, supply, installation, and maintenance of the cable be awarded on a competitive basis. AT & T and HTC note that HAW-5 procurement decisions are not matters on which the Joint Applicants can, by themselves, change because 17 of the 23 HAW-5 owners are carriers from outside the United States. They state that contracts for procurement of the system will be awarded to those firms in the market best able to meet the requirements of HAW-5 in a cost-effective matter and the HAW-5 owners must have the flexibility in their day-to-day installation operations to secure quality products and services on a timely basis. In this regard, the Joint Applicants reference the procurement of the TPC-4 Cable System in which the Commission did not specify a particular method for the selection of subcontractors. They also note that the provisioning of a portion of the HAW-5 cable system by a United States company will: 1) be beneficial to the U.S. economy; 2) enhance the role of U.S. industry as a world leader in submarine lightwave cable technology; and 3) continue to ensure that the U.S. submarine cable industry is a viable competitor and that the prices of future submarine cable systems remain as low as possible.

***12** 39. We find no basis to question the procurement practices of the Joint Applicants. The Joint Application states that qualified suppliers will be afforded a reasonable opportunity to participate in the procurement of HAW-5. The procurement of HAW-5 is therefore consistent with our goal to assure U.S. opportunity to participate in procurement and supply processes. [FN26] As the Joint Application notes, the U.S.-supplied portions of HAW-4/TPC-3 used more than 65 subcontractors from 22 states. The Joint Applicants also anticipate that a multitude of subcontractors will participate in the construction or provision of materials for any portion of HAW-5 that will be supplied by AT & T. [FN27] We also observe that the competitive presence of the NPC cable also will serve as a strong incentive for efficient procurement of HAW-5. Moreover, under price caps regulation, AT & T has the incentive to subcontract with those suppliers that offer a competitive price. Given the existing incentives to subcontract in a cost-effective manner, we do not believe it is necessary to condition the grant of HAW-5 on further assurances of competitive procurement practices.

6. International Comity

40. Our decisions authorizing the construction and operation of transoceanic submarine cable systems historically have recognized that correspondent acceptance is an important public interest factor. [FN28] Twenty-three telecommunications entities and carriers, including those from 14 foreign countries, have agreed that the HAW-5 system design and 1993 service date will meet the service needs of their customers. Thus, we conclude that HAW-5 will promote international comity.

B. Other Issues

41. The Need for A Planning Proceeding. The State of Hawaii is concerned that the Joint Applicants fail to address or acknowledge previous Commission planning or authorization dockets for the POR. [FN29] Although the State of Hawaii concedes that the Commission can act without undertaking planning proceedings, it believes that the Commission has to continue to view applications in a broader planning perspective to ensure that ratepayers are not burdened with unnecessary facility investments. Of particular concern to the State of Hawaii is the fact that the POR Planning proceeding, which covered the 1995 time frame, did not contemplate the proposed cable or additional cable facilities.

42. The Joint Applicants state that there is no need for them to address the POR Planning proceeding because the Commission has specifically determined that separate facilities planning dockets are not required as a matter of law and are not necessary as a matter of policy in the current competitive environment. [FN30] Further, they note that all of the facilities considered in the POR Planning proceeding have either been placed into operation or are in the final stages of construction, and the specific facility configuration considered in the POR Planning proceeding in 1985 is no longer at issue.

***13** 43. In authorizing the construction and operation of the TPC-4 Cable System, we addressed the issue of whether a planning process is required before authorization of new POR facilities. In the TPC-4 Decision we found that there is no requirement in the Communications Act that this Commission must undertake a facilities planning process before it considers a Section 214 application to construct and operate a submarine cable system. Further, we ****7350** stated that Section 214 of the Act provides ample authority for Commission consideration of those factors that bear on a public interest, convenience and necessity determination. [FN31] Citing several recent developments, we concluded that we could now move away from a comprehensive planning process prior to authorizing the introduction of new facilities in the POR. First, we noted that the introduction of price caps regulation of AT & T significantly protects AT & T ratepayers from the results of potentially imprudent facilities investments. Second, we noted that the elimination of circuit distribution guidelines in favor of agreements between Comsat and AT & T and other carriers on the distribution of traffic between cable and satellite facilities and the introduction of competing private cable and satellite systems provide incentives for efficient investments in transmission facilities. In light of these developments, we found it unnecessary to engage in a facilities planning process before acting on the Section 214 application to construct and operate the TPC-4 cable system. Nothing has changed in the interim, and the State of Hawaii has not pointed to any compelling reasons which would justify reinstating the planning process. Accordingly, we hereby reaffirm our previous findings on this subject. [FN32]

44. HTC Issues. The State of Hawaii believes that in the context of this proceeding the Commission should pay particular attention to issues involving HTC. First, the State of Hawaii asserts that it is unclear why HTC would use HAW-5, a cable connecting the U.S. Mainland and Hawaii, to serve Japan. Second, the State of Hawaii points to "discrepancies" in HTC's reporting of the amount of cable capacity to use to Japan. According to the State of Hawaii, HTC reports that its current cable capacity to Japan is 77 circuits but that, in a recent application for additional POR satellite circuits, HTC reported only 66 cable circuits to Japan. On the basis of the lower number, the State of Hawaii notes that HTC was authorized to acquire 22 additional satellite circuits to Japan over the next two years. The State of Hawaii also questions HTC's need for the HAW-5 capacity based on current international traffic patterns specified in HTC's company reports. The State of Hawaii cites HTC's ownership of fiber optic circuit capacity in HAW-4, its ownership interests in other cable facilities and its ownership of satellite earth station facilities that, along with GTE Spacenet, provide satellite circuit capacity between the U.S. Mainland and Hawaii.

***14** 45. Based on these factors, the State of Hawaii cites two levels of concern. It states that under assignment provisions set forth in Section 24 of the HAW-5 C & MA, the capacity could be reassigned by HTC to its parent company, GTE Corporation, merely by giving written notice to other parties to the C & MA. In

addition, it believes that GTE Corporation is likely to seek District Court relaxation of the GTE Consent Decree restrictions, particularly those that bar it from interstate/interLATA service provision. [FN33] Thus, the State of Hawaii fears that HTC's capacity could be assigned to GTE Corporation for affiliated company (or GTE Operating Company) provision of interstate/interLATA services in the future. The State of Hawaii asserts that HTC has provided GTE Corporation affiliates with other such assets at little, or no, cost previously and such future action could adversely and directly affect Hawaiian ratepayers.

46. Upon consideration of the concerns raised by the State of Hawaii and HTC's response to those concerns, we find no basis to deny HTC's proposed participation in the HAW-5 Cable System. HTC indicates that it would use HAW-5 capacity to reach the U.S. Mainland to interconnect with the NPC cable in Oregon, a routing arrangement required to provide IMTS and private line service to Japan via HTC's correspondent, International Digital Communication (IDC), a competitor of Kokusai Denshin Denwa (KDD) in Japan. HTC notes that capacity is not available on the TPC-3 cable to Japan for the joint use of HTC and IDC. [FN34] HTC indicates that the remaining capacity it proposes to acquire on HAW-5 would be used for service between Hawaii and Europe.

47. We find that HTC's past usage of POR cable facilities clearly supports its participation in HAW-5 for international service to Europe as well as Pacific locations. We also reject the State of Hawaii's suggestion that because of IDC's partial ownership in TPC-4, a cable scheduled to be operational before HAW-5 in 1991, HTC should be required to justify why it could not purchase IRUs on TPC-4 and use them in conjunction with the IDC-owned circuits to provide the same service over a more economic routing. First, we note that the TPC-4 cable is fully subscribed and IDC's interest in the cable system is very limited, consisting of only three MIUs. Of the three MIUs, one each is assigned for service with US Sprint, MCI and British Telecommunications. Second, assuming, arguendo, that capacity were available on TPC-4, HTC would still have to obtain facilities to reach the U.S. Mainland to access the TPC-4 cable. In light of the State of Hawaii's concern with using HAW-5 to reach the U.S. Mainland to interconnect with the NPC cable, it is unclear why using a similar route to access the TPC-4 cable would be any less circuitous. [FN35] Moreover, we find no basis to question HTC's business judgment in choosing to route traffic carried in conjunction with IDC via the NPC cable given the extent of HTC's current and projected traffic between Hawaii and Japan and IDC's considerable ownership interest in the NPC cable. In view of these circumstances, we find no reason to question HTC's decision to route its traffic in a particular manner.

***15** 48. There is also no discrepancy apparent in HTC's reporting of circuits in service between the Hawaii and Japan. In its application to acquire additional POR satellite circuits, HTC indicated that it had 66 cable circuits in service as of October 31, 1989. Attachment A to the Joint Application indicates that as of December 31, 1989, HTC had 77 cable circuits in operation between Hawaii and Ja-

pan. Based on this information, it would appear that HTC activated an additional 11 cable circuits for service to Japan between October 31, 1989 and December 31, 1989. In addition, contrary to the State of Hawaii's claims, HTC does not own satellite earth stations facilities or provide satellite circuit capacity for service to the U.S. Mainland. An affiliated company, GTE Spacenet, does own and operate such capacity. However, we fail to see the significance of GTE Spacenet, albeit a sister company of HTC, owning and operating domestic earth station and satellite facilities capable of service paralleling the proposed HAW-5 system. We note that subject to some limited exceptions not relevant here, the GTE Spacenet system is authorized to provide domestic service which HTC cannot provide. Even if the GTE Spacenet system could be used to connect with international facilities on the U.S. ****7351** Mainland for international service, HTC would have to account for the cost of using the GTE Spacenet system in pricing its service.

49. We also find no merit in the State of Hawaii's argument that HTC could transfer HAW-5 capacity to its parent, GTE Corporation, at little or no cost and apparently with no regulatory oversight. Although the State of Hawaii's concerns are based on the terms of the C & MA, we note that paragraph 59, infra, clearly provides that the Commission retains jurisdiction "over all matters relating to the Joint Applicants' ownership, management, maintenance, and operation of the cable system as authorized herein." This provision is broad enough to permit us to address the specific concerns of the State of Hawaii. Moreover, the State of Hawaii's concern that GTE Corporation might seek relief from the interstate service restraints in the GTE Consent Decree and that HAW-5 facilities could be used for interstate services is speculative and not germane to our decision here. Should GTE Corporation seek such relief, its request would be subject to appropriate judicial and regulatory review.

50. PAS Petition to Deny. PAS does not oppose a grant of the HAW-5 cable. Rather, PAS' petition to deny is directed solely to TRT/FTC's ownership interest in the cable and the relationship of TRT/FTC to France Telecom which has refused to engage in two-way service via PAS' separate satellite system. Although PAS has secured INTELSAT Article XIV(d) consultations for all of its services with many countries, it notes that France has been a prominent exception. According to PAS, despite clear customer interest in both data and video transmissions to and from France, France Telecom has consistently refused to consider any INTELSAT Article XIV(d) consultations for services beyond one-way video (U.S. to France). Thus, PAS argues, the French telecommunications market remains effectively closed to U.S. separate satellite systems. Since France Telecom holds a 14.9 percent interest in TRT/FTC through various subsidiaries and holding companies, PAS asserts that TRT/FTC should not be authorized to expand its operations in the United States during the pendency of its petition for reconsideration of the Common Carrier Bureau's FTCC Ruling. [FN36] It states that the Commission has authority to evaluate market access issues in acting on Section 214 applications such as the instant application involving TRT/FTC.

***16** 51. PAS' argument on this point is not new. In its FTCC Ruling, the Bureau concluded that FTCC (now TRT/FTC) should be classified as non-dominant in its provision of all international services to all points, [FN37] except that it would continue to be classified as dominant in its provision of all common carrier services with France. The FTCC Ruling conditioned the grant of non-dominant status to all points except France on the amendment of FTCC's existing Section 214 authorization for switched voice services to France to include certain standards applicable to the access filings of dominant carriers. The FTCC Ruling also concluded that TRT should not be treated as a dominant carrier either generally or for the French market. PAS sought reconsideration of the FTCC Ruling. During the pendency of its petition for reconsideration, PAS has filed several petitions to deny applications filed by TRT/FTC for the acquisition of facilities to provide its authorized services to various countries. In each case, the Bureau found that PAS had failed to explain why TRT/FTC should be considered to possess market power with countries other than France. In the context of this proceeding, PAS requests that the subject application be denied with regard to participation by TRT/FTC or, at a minimum, held in abeyance pending final resolution of its petition for reconsideration of the FTCC Ruling.

52. On June 1, 1990, the Bureau released its FTCC Reconsideration Order, which affirmed the FTCC Ruling in all respects. [FN38] Specifically, the Bureau affirmed its earlier determination that FTCC does not fall strictly within the definition of a foreign-owned carrier. The Bureau also affirmed its finding that PAS has not provided any evidence to demonstrate that FTCC should be classified as a foreign-owned and, consequently, dominant carrier in its provision of international common carrier services solely because of the presence of a French Cables et Radio (FCR) representative director on the board of the holding company, ICH. PAS did not file an application for review of the FTCC Reconsideration Order; accordingly, its request for deferral pending resolution of that proceeding is moot. Even if TRT/FTCC had been found to be dominant for services to countries other than France, PAS has not explained why, in this case, TRT/FTC's participation in HAW-5 should be denied. As the Bureau noted in the FTCC Reconsideration Order, while PAS may be correct that there has been little or no progress with France on issues of concern to PAS, there has been progress with France on other issues, such as lower accounting rates with U.S. carriers, which has continued. Accordingly, we deny PAS' request that we deny or hold in abeyance that portion of the application which relates to TRT/FTC's participation in HAW-5.

III. CONCLUSION AND ORDERING CLAUSES

53. The instant application to construct and operate the HAW-5 optical fiber cable system will serve the public convenience and necessity. The proposed system is required to meet forecasted demand and to satisfy the service preferences and needs of users. Because of technological innovation, the half-circuit cost for capacity in HAW-5 is approximately half the cost for comparable capacity in

HAW-4. The HAW-5 Cable System will provide service quality benefits in terms of increased route and media diversity and restoration capability, and will enhance intermodal and intramodal competition. The proposed system also meets international comity concerns.

***17** 54. Based on the information provided by the Joint Applicants, we conclude that the grant of the requested authorizations will not have a significant effect on the environment as defined in Section 1.1307 of the Commission's Rules and Regulations implementing the National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4335 (1976). [FN39] Consequently, no environmental assessment is required to be submitted with this Joint Application by Section 1.1311 of the Commission's Rules.

55. Upon consideration of the Joint Application, we find that the present and future public interest, convenience and necessity require the construction and operation of the HAW-5 cable system as described herein.

56. Accordingly, IT IS ORDERED that the Joint Application, File No. **I-T-C-90-081,** of the Joint Applicants (AT & T, HTC, MCII, TRT/FTC, US Sprint and Worldcom) [FN40] is GRANTED, subject to the following terms, conditions and limitations, and the Joint Applicants are authorized to:

****7352** (a) construct and operate the HAW-5 Cable System as proposed herein;

(b) acquire and activate capacity in the HAW-5 Cable System, on an ownership basis, in accordance with the interests indicated in the MIUs specified in Appendix 3;

(c) acquire capacity, by lease, in such connecting facilities as may be required to extend capacity in the HAW-5 Cable System;

(d) utilize digital circuit multiplication systems (DCMS) equipment to derive additional voice paths from the circuits (MIUs) authorized herein in accordance with the appropriate Commission authorizations; and

(e) activate and operate capacity in the HAW-5 Cable System and aforementioned extension facilities for the provision of the Joint Applicants' authorized telecommunications services.

57. IT IS FURTHER ORDERED that when a given Joint Applicant seeks to acquire or transfer an ownership or IRU interest in the HAW-5 capacity, the reimbursement it receives shall be on the basis of depreciated original cost (or the pro-rated accumulated cost of such circuit if the systems are not then operational) or in conformance with such policy as the Commission shall develop in the future regarding the price at which IRUs will be made available.

58. IT IS FURTHER ORDERED that the Joint Applicants shall make available half-

interests in the HAW-5 capacity to such present and future U.S. carriers as may be authorized by the Commission to acquire such capacity.

59. IT IS FURTHER ORDERED that the Commission retains jurisdiction to reallocate U.S. carriers' interests in capacity herein authorized, as the public interest may require to accommodate additional carriers or otherwise, with, where required, the concurrence of the foreign administration or carriers concerned, and, further, jurisdiction is retained by the Commission over all matters relating to the Joint Applicants' ownership, management, maintenance, and operation of the cable system as authorized herein, to assure the most efficient use not only of this cable system, but of all means of communications between the U.S. and Pacific Ocean Region.

***18** 60. IT IS FURTHER ORDERED that the Commission retains jurisdiction to review the DCMS, multiplexing, and interworking arrangements and attribution of the costs thereof and to require such changes in the provision of these services and equipment as may be necessary.

61. IT IS FURTHER ORDERED that no Joint Applicant that is deemed a dominant carrier pursuant to the Commission's decision in CC Docket No. 85-107 [FN41] shall dispose of any interest in any HAW-5 capacity it is authorized to acquire in any way without prior authorization by the Commission.

62. IT IS FURTHER ORDERED that the Joint Applicants shall include HAW-5 facility use in the monthly Circuit Status Reports filed pursuant to the Commission's Orders. These reports shall be filed no later than the 20th day of each month providing the information for the preceding month.

63. IT IS FURTHER ORDERED that PAS' Petition to Deny IS DENIED.

64. IT IS FURTHER ORDERED that this authorization is issued subject to the terms and conditions of any license issued to the Joint Applicants herein under the act entitled "An Act relating to the landing and operation of submarine cables in the United States" (47 U.S.C. §§ 34-39), covering the subject submarine cable, and shall become effective upon the acceptance of the aforementioned license by all such parties.

FEDERAL COMMUNICATIONS COMMISSION
Donna R. Searcy

Secretary

FN1 Three carriers originally listed as Joint Applicants are no longer involved in the acquisition of HAW-5 capacity. By letter dated June 20, 1990 the Commission approved the pro forma transfer of control and assignment of licenses from FTCC to TRT/FTC. The transaction was consummated on June 29, 1990, which resulted in TRT/FTC as the sole surviving carrier. See File Nos. CSG-90-027-(5)AL and I-T-C-90-067-TC. Long Distance/USA (LD/USA) has been acquired by US Sprint and the

capacity LD-USA originally proposed to acquire in HAW-5 has been assigned to US Sprint. Also, Fedex International Transmission Corporation has withdrawn from HAW-5.

FN2 Although AT & T did not indicate that its reply was filed on behalf of the Joint Applicants, the pleading clearly represents their position. Thus, all references herein to the Joint Applicants' position should be construed as including the views expressed in the Joint Application and AT & T's reply.

FN3 All applicants initially may not be certified to serve directly all territories that the facilities covered by the application are capable of serving. Each applicant proposing the extension of its services into such territories by means of the HAW-5 facilities will be required to seek such appropriate authorization as may be required when it proposes to activate the facilities.

FN4 With a capacity of 15,120 MAUOs, HAW-5 is designed as a part of an integrated common carrier network to meet specific service requirements for additional digital cable facilities in the POR, to provide additional digital connectivity with the HAW-4/TPC-3, G-P-T, TPC-4, H-J-K, Tasman-2, PacRimEast and PacRimWest cable systems. See Appendix 4.

FN5 The HAW-5 Cable System will be armored where required in shallow water. It will also be fish bite protected as necessary at the depths where this phenomenon may occur. Also, in order to protect the cable from damage due to fishing and trawler activities off the North American Continental Shelf, the cable will be buried.

FN6 A MIU is the minimum unit of ownership investment in the HAW-5 Cable System and is the equivalent of 30 MAUOs. Interests in fewer than 30 MAUOs may be purchased on an indefeasible right of user (IRU) basis. A MAUO is an equivalent digital channel operating at 64,000 bits per second and an additional 9,684,656 bits per second required for multiplexing.

FN7 Today we also grant the Joint Applicants' separate requests to construct and operate the PacRimEast and PacRimWest cable systems. The Tasman-2 cable will be considered at a later date.

FN8 In a separate decision, we also grant the Joint Applicants' request for a cable landing license (File No. S-C-L-90-004) pursuant to the Cable Landing License Act.

FN9 AT & T et al., (TAT-7 Order), 73 F.C.C.2d 248, 256 (1979).

FN10 See, e.g., AT & T et al. (TAT-9 Order), 4 FCCRcd 1129, 1131 (Com.Car.Bur.1988). See also Policies to be Followed in the Authorization of Common Carrier Facilities to Meet Pacific Telecommunications Needs during the Period 1981-1985 (POR Planning), 102 FCC2d 353, 355 (1985).

FN11 The State of Hawaii disputes this point, noting that the Circuit Status Reports do not show usage or traffic carried over the subject facilities, but instead the quantity of circuits held and/or owned by each of the carriers without regard to use.

FN12 See Tel-Optik Limited (Private Submarine Cable), 100 F.C.C.2d 1033, 1049 (1985); Pacific Telecom Cable, Inc., 2 FCCRcd 2686, 2690, n. 15 (Com.Car.Bur 1987); clarified, 4 FCCRcd 4454, 4455 (Comm.Car.Bur.1989). Inquiry into the Policies to be Followed in the Authorization of Common Carrier Facilities to Meet North Atlantic Needs During the 1991-2000 Period, 3 FCCRcd 3979, 3989-90 (1988) (North Atlantic Facilities Planning).

FN13 Id.

FN14 See Policy and Rules Concerning Rates for Dominant Carriers, CC Docket No. 87-313, 4 FCCRcd 2873 (1989) (Price Caps Order).

FN15 See American Telephone & Telegraph, et al., 4 FCCRcd 8042, 8046 (1989) (TPC-4 Decision).

FN16 Price caps regulation also applies to HTC. See Policy and Rules for Dominant Carriers, CC Docket No. 87-313, para. 255 (FCC 90-314, released Oct. 4, 1990).

FN17 Id. at 8045.

FN18 See International Competitive Carrier Policies, 102 F.C.C.2d 812, 829 (1985) (International Competitive Carrier); recon. denied, 60 RR2d (P & F) 1435 (1986); US Sprint Communications Company Limited Partnership, 4 FCCRcd 6279, 6284 (Com.Car.Bur.1989).

FN19 In 1985, the Commission issued a Notice of Proposed Rule Making that terminated the inquiry into the compatibility of rate integration and competition for interstate communications between the contiguous states and Hawaii. At that time, the State of Hawaii also asserted that the Hawaii should not be disadvantaged by being singled out for a special rate structure. The State of Hawaii added that the rate integration policy, which it supported, had substantially achieved its objective of lowering rates between the noncontiguous points and the contiguous states. See Integration of Rates and Services for the Provision of Communications by Authorized Common Carriers, 50 Fed.Reg. 41714 (October 15, 1985). The State of Hawaii's concern about the integration of international rates and the potential impact of the Joint Applicants' investment in HAW-5 on Hawaii ratepayers would appear to be lessened by the fact that two-thirds of HAW-5 capacity is assigned for domestic use.

FN20 See North Atlantic Facilities Planning, 3 FCCRcd at 3986; All America Cable and Radio Inc., et al., 67 FCC2d 451, 469 (1978).

FN21 North Atlantic Facilities Planning, 3 FCCRcd at 3987.

FN22 The cost of HAW-4 was $191.4 million for its total capacity of 7,560 MAUOs. HAW-5 offers twice the capacity of HAW-4 for a total cost of $199 million. Therefore, the capital cost of each HAW-5 MAUO will be almost half the cost of a similar unit of capacity on HAW-4.

FN23 See TPC-4 Decision, 4 FCCRcd at 8046.

FN24 Id. Both AT & T and HTC are under price caps regulation.

FN25 North Atlantic Facilities Planning, 3 FCCRcd at 3989.

FN26 See Pacific Telecom Cable, Inc., 4 FCCRcd 8061, 8066 (1989).

FN27 While we rely solely on the record set forth above, we note that AT & T was awarded contracts in the sum of $191 million to construct one-half of TPC-4. See FCC Press Release, October 16, 1989.

FN28 See North Atlantic Facilities Planning, 3 FCCRcd at 3989.

FN29 See supra footnote 10.

FN30 See TPC-4 Decision, 4 FCCRcd at 8045

FN31 Id.

FN32 We also note that even under the POR planning process U.S. Mainland-Hawaii domestic facilities were typically excluded. Thus, the fact that the HAW-5 cable was not contemplated in the POR planning process is understandable given the fact that 66.6% of the cable system will be used for purely domestic service.

FN33 See U.S. v. GTE Corp., 603 F.Supp. 730 (D.C.Cir.1984).

FN34 We fail to see the basis for the State of Hawaii's suggestion that we investigate KDD's failure to "interconnect" with respect to TPC-3 capacity. The State of Hawaii's argument in this regard is apparently based on its belief that KDD will not make available to its competitor, IDC, some of its capacity in TPC-3 for joint IDC-HTC use. Contrary to the State of Hawaii's characterization, this is not an "interconnection" issue. Rather, the issue is the business judgment of the owners in deciding the amount of capacity to purchase in particular cable systems. Apparently, there has been no request from IDC to acquire capacity in TPC-3 for joint use with HTC, which is indicative of a lack of interest in such a routing arrangement. Although we are concerned with the efficient use of telecommunications facilities, there in no basis on the record to warrant substituting our judgment for the business decisions of IDC and HTC.

FN35 TPC-4, which extends from California to Japan, does not land in Hawaii.

FN36 FTC Communications, Inc., 4 FCCRcd 5633 (Com.Car.Bur.1989) (FTCC Ruling); recon. denied, 5 FCCRcd 3323 (Com.Car.Bur.1990) (FTCC Reconsideration Order).

FN37 See supra footnote 1.

FN38 FTC Communications, Inc., 5 FCCRcd 3323 (Com.Car.Bur.1990).

FN39 See Joint Application at p. 21.

FN40 See supra note 1.

FN41 See International Competitive Carrier, 102 FCC2d at 822, 832.

****7354** APPENDIX 1

SCHEDULE B

VOTING INTERESTS IN THE HAW-5 CABLE SYSTEM

PARTIES	PERCENT
AT & T	51.98413
BT PLC (UK)	1.28968
DBP (Germany)	0.49603
FT (France)	0.19841
HKTI (Hong Kong)	0.39683
HTC	1.78571
IDC (Japan)	0.19841
ITALCABLE (Italy)	0.09921
ITDC (Taiwan)	0.09921
ITJ (Japan)	0.09921
KDD (Japan)	0.79365
MCII	11.50794
MCL (UK)	0.89286
NPTT (Netherlands)	0.09921
OTC (Australia)	12.40079
PLDT (Philippines)	1.19048
RTT (Belgium)	0.19841
STA (Sweden)	0.09921
TELEGLOBE (Canada)	0.69444
TNI (New Zealand)	2.08333
TRT/FTC	0.19841
US SPRINT	11.90476
WORLDCOM	1.28968
TOTAL	100.00000

****7355** APPENDIX 2

SCHEDULE C

OWNERSHIP INTERESTS AND ALLOCATION OF CAPITAL, OPERATING AND MAINTENANCE COSTS OF SEGMENT B; AND ALLOCATION OF CAPITAL, OPERATING, AND MAINTENANCE COSTS OF SEGMENTS A AND C OF THE HAW-5 CABLE SYSTEM

PARTIES	SEGMENT A	SEGMENT B	SEGMENT C
AT & T	51.98413	51.98413	51.98413
BT PLC	1.28968	1.28968	1.28968
DBP	0.49603	0.49603	0.49603
FT	0.19841	0.19841	0.19841
HKTI	0.39683	0.39683	0.39683
HTC	1.78571	1.78571	1.78571
IDC	0.19841	0.19841	0.19841
ITALCABLE	0.09921	0.09921	0.09921
ITDC	0.09921	0.09921	0.09921
ITJ	0.09921	0.09921	0.09921
KDD	0.79365	0.79365	0.79365
MCII	11.50794	11.50794	11.50794
MCL	0.89286	0.89286	0.89286
NPTT	0.09921	0.09921	0.09921
OTC	12.40079	12.40079	12.40079
PLDT	1.19048	1.19048	1.19048
RTT	0.19841	0.19841	0.19841
STA	0.09921	0.09921	0.09921
TELEGLOBE	0.69444	0.69444	0.69444
TNI	2.08333	2.08333	2.08333
TRT/FTC	0.19841	0.19841	0.19841
US SPRINT	11.90476	11.90476	11.90476
WORLDCOM	1.28968	1.28968	1.28968
TOTAL	100.00000	100.00000	100.00000

NOTE: The percentages set forth above are calculated from MIU assignments shown in Schedule D.

****7356** APPENDIX 3

SCHEDULE D

ASSIGNMENT OF MIUS

JOINTLY ASSIGNED MIU CAPACITY IN THE MAU-5 CABLE SYSTEM

PARTIES	FTDC	OTC	PLDT	TNT	SUBTOTAL
AT & T	1	63	12	6	82
BT PLC	0	10	0	3	13
DBP	0	4	0	1	5
FT	0	1	0	1	2
HKTI	0	4	0	0	4
IDC	0	2	0	0	2
ITALCABLE	0	1	0	0	1
ITJ	0	1	0	0	1
KDD	0	7	0	1	8
MCII	0	9	0	3	12
MCL	0	8	0	1	9
MPTT	0	1	0	0	1
RTT	0	1	0	1	2
STA	0	1	0	0	1
TELEGLOBE	0	5	0	2	7
TRT/FTC	0	2	0	0	2
US SPRINT	0	4	0	2	6
WORLDCOM	0	1	0	0	1
SUBTOTAL	1	125	12	21	159

PARTIES	
AT & T	221
NTC	9
MCII	52
US SPRINT	57
WORLDCOM	6
SUBTOTAL	345

SUMMARY

PARTIES	JOINTLY ASSIGNED	WHOLLY ASSIGNED	HALF MIU INTERESTS

AT & T	82	221	524
BT PLC	13	0	13
DBP	5	0	5
FT	2	0	2
HKTI	4	0	4
HTC	0	9	18
IDC	2	0	2
ITALCABLE	1	0	1
ITDC	1	0	1
ITJ	1	0	1
KDD	8	0	8
MCII	12	52	116
MCL	9	0	9
NPTT	1	0	1
OTC	125	0	125
PLDT	12	0	12
RTT	2	0	2
STA	1	0	1
TELEGLOBE	7	0	7
TNI	21	0	21
TRT/FTC	2	0	2
US SPRINT	6	57	120
WORLDCOM	1	6	13
TOTAL	318	345	1008

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1990 WL 602935 (F.C.C.), 68 Rad. Reg. 2d (P & F) 900, 5 F.C.C.R. 7344, 5 FCC Rcd. 7344

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