



NIPPON TELEGRAPH AND TELEPHONE CORPORATION
20-2 Nishi-shinjuku 3-Chome Shinjuku-ku, Tokyo 163-1419 Japan

October 5th, 1998

Mr. Th. Irmer
Director of Telecommunication Standardization Bureau
International Telecommunication Union
Place des Nations
1211 Geneva 20
Switzerland

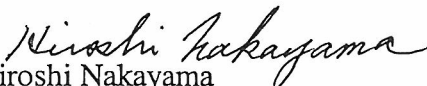
Subject: Patent Licensing Policy

Dear Sir:

Nippon Telegraph and Telephone Corporation hereby declares that it is prepared to license its patents, both granted and pending, which are necessary to manufacture, use, and sell implementations of the proposed Recommendation G.983 in relation to "High Speed optical access systems based on Passive Optical Network (PON) techniques". The license will be granted to an unlimited number of applicants throughout the world under reasonable and non-discriminatory terms and conditions.

We would like to thank you for your organizational activities as Director of ITU for international standards.

Yours sincerely,


Hiroshi Nakayama
Executive Manager
Intellectual Property Department
Contact Tel : +81-3-5353-4379
Contact Fax : +81-3-5353-5517

November. 12, 1998

Mr. Th. Irmer
Director of Telecommunication Standardization Bureau
International Telecommunication Union
Place des Nations
1211 Geneva 20
Switzerland

Dear Mr. Th. Irmer

Please advise if you received the patent policy.
Please contact me the following numbers or e-mail address.

Kenji NAKANISHI
TEL : +81-43-211-3255
FAX : +81-43-211-8883
e-mail : nakanisi@ansl.ntt.co.jp

Best regards,

Kenji Nakanishi
Kenji Nakanishi

NTT's patent relating to the Recommendation G.983

Patent Number : JP 2693804

Patent Title : Tajyuu densou houshiki
(Multiplexed signal transmission system)

Application Number : JP 2-137651 (Publication No. JP 4-35330)

Patent Title : Hikari jyushin houshiki
(Optical signal receiver)

Application Number : JP 2-225403 (Publication No. JP 4-108206)

Patent Title : Kousoku AGC kairo
(Hi-speed AGC circuit)

Application Number : JP 2-310251 (Publication No. JP 4-181837)

Patent Title : Pointo-maruchipointo densou houshiki
(Point-Multipoint signal transmission system)

Application Number : JP 3-053281 (Publication No. JP 4-269023)

Patent Title : Hikari densou souchi
(Optical signal transmission equipment)

Application Number : JP 3-149720 (Publication No. JP 4-347931)

Patent Title : Isou douki kurokku tyuusyutu kairo
(Phase synchronized clock extraction circuit)

Application Number : JP 4-102943 (Publication No. JP 5-300166)

Patent Title : Ba-suto shingou tajyuuka seigyo houshiki
(Multiplexed burst signal management system)

Application Number : JP 4-123943 (Publication No. JP 5-327687)

Patent Title : Fure-mu douki hogo kairo
(Frame synchronization protection circuit)

Application Number : JP 4-140418 (Publication No. JP 5-336143)

Patent Title : Ba-suto shingou tajyuuka seigyo houshiki
(Multiplexed burst signal management system)

Application Number : JP 4-174529 (Publication No. JP 6-21540)

Patent Title : Hakkou soshi kudou kairo
(Driving circuit for optical transmission device)

Application Number : JP 4-211339 (Publication No. JP 6-61752)

Patent Title : Kouden henkan you puri anpu kairo
(Pre-amplifier circuit for photoelectric transducer)

Application Number : JP 5-267491 (Publication No. JP 7-120629)

Patent Title : Hikari densou moju-ru
(Optical signal transmission module)

Application Number : JP 6-052022 (Publication No. JP 7-264202)
Patent Title : Pointo-maruchipointo densou shisutemu kidou seigyo souchi
(Motive equipment for point-multipoint signal transmission system)

Application Number : JP 6-056079 (Publication No. JP 7-264153)
Patent Title : Pointo-maruchipointo densou shisutemu no jyushin reberu seigyo
souchi
(Reception level management equipment for point-multipoint signal
transmission system)

Application Number : JP 6-235404 (Publication No. JP 8-97842)
Patent Title : Ba-suto shingou sousyutu kanri you memori wo mochiita
dainamikku po-ringu houshiki
(Dynamic polling system using burst signal transmission management
memories)

Application Number : JP 6-235423 (Publication No. JP 8-97843)
Patent Title : Chien sokutei housiki
(Delay measurement system)

Application Number : JP 6-272032 (Publication No. JP 8-139526)
Patent Title : Hikari jyushin souchi
(Optical signal receiver)

Application Number : JP 6-287676 (Publication No. JP 8-149102)
Patent Title : Taiiki wariate oyobi henkou houhou
(Bandwidth allocation and modification method)

Application Number : JP 6-291077 (Publication No. JP 8-149151)
Patent Title : Kotei syuuki no kaunta oyobi memori wo mochiita dainamikku po-ringu
houshiki
(Dynamic polling method using fixed cycle counter and memory)

Application Number : JP 6-300460 (Publication No. JP 8-163166)
Patent Title : Dainamikku po-ringu seigyo souchi
(Dynamic polling management equipment)

Application Number : JP 6-329332 (Publication No. JP 8-163168)
Patent Title : tajyuu tuushin houshiki
(Multiplexed signal transmission system)

Application Number : JP 7-184447 (Publication No. JP 9-36849)
Patent Title : Bitto douki kairo oyobi bitto douki houshiki
(Bit-synchronization circuit and system for the same)

Application Number : JP 7-202180 (Publication No. JP 9-51267)
Patent Title : Isou douki kairo
(Phase synchronization circuit)

Application Number : JP 7-230243 (Publication No. JP 9-83500)
Patent Title : Ba-suto douki kairo
(Burst synchronization circuit)

Application Number : JP 7-275639 (Publication No. JP 8-213977)
Patent Title : Jyushin isou douki kairo
(Received phase synchronization circuit)

Application Number : JP 7-302565 (Publication No. JP 9-149000)
Patent Title : Jyushin isou tyousei housiki
(Received phase regulation method)

Application Number : JP 7-320368 (Publication No. JP 9-162911)
Patent Title : Jibunkatu tagen setuzoku sisutemu ni okeru de-ta sou-jyushin houhou
narabini jibunkatu tagen setuzoku sisutemu
(Data transmission and reception method for time-division multiplexed
signal connection system and system for the same)

Application Number : JP 7-324442 (Publication No. JP 9-162853)
Patent Title : Ba-suto douki kairo
(Burst synchronization circuit)

Application Number : JP 8-072787 (Publication No. JP 9-18054)
Patent Title : Hikari kyoudo seigyō souchi oyobi hikari sōshin souchi
(Optical intensity management equipment and optical signal sender)

Application Number : JP 8-081077 (Publication No. JP 9-270755)
Patent Title : Jidou shikiichi seigyō kairo oyobi hikari jyushin souchi
(Automatic threshold management circuit and optical signal receiver)

Application Number : JP 8-118001 (Publication No. JP 9-307505)
Patent Title : Ba-suto densō yō hikari sōshin souchi
(Optical signal sender for burst signal transmission)

Application Number : JP 8-183634 (Publication No. JP 10-28129)
Patent Title : Taimu surotto wariate seigyō houhou oyobi souchi
(Time-slot allocation management method and equipments for the
same)

Application Number : JP 8-203647 (Publication No. JP 10-51448)
Patent Title : Keihō yokushi houhou oyobi keihō yokushi tuchi souchi
(Alarm inhibition method and notification equipment for
Alarm inhibition)

Application Number : JP 8-254827 (Publication No. JP 10-10775)
Patent Title : Taimu surotto wariate seigyō houhou oyobi taimu surotto wariate
souchi
(Time-slot allocation management method and equipments for the
same)

Application Number : JP 8-342196 (Publication No. JP 9-233103)
Patent Title : PDS densou houshiki
(PDS transmission system)