

SUPPLY RECORD - REPEATERED SYSTEM (1)

1st Generation (Regenerator System using 1.31 micron wavelength)

System	Landing Countries	Capacity	Route Length	Delivery
TPC-3 (Note 1)	Japan, U.S.A. (Guam, Hawaii)	560Mbps (280Mbps x 2fp)	3,760km	Dec. 88
Hong Kong-Japan-Korea	Hong Kong, Japan, Korea	560Mbps (280Mbps x 2fp)	4,700km	Apr. 90
Kuantan-Kota Kinabaru	Malaysia	840Mbps (420Mbps x 2fp)	1,570km	Dec. 90
North Pacific Cable (NPC)	Japan, U.S.A. (Mainland)	1680Mbps (420Mbps x 4fp)	9,400km	Apr. 91
Surabaya-Banjarmasin	Indonesia	280Mbps (280Mbps x 1fp)	410km	Dec. 91

Note 1: The very first Branching Units deployed in the Pacific

SUPPLY RECORD - REPEATERED SYSTEM (2)

2nd Generation (Regenerator System using 1.55 micron wavelength)

System	Landing Sites	Capacity	Route Length	Delivery
UK-Germany No.5 (Note 2)	UK, Germany	3.6Gbps (1.8Gbps x 2fp)	500km	Oct. 91
Brunei-Singapore	Brunei, Singapore	1120Mbps (560Mbps x 2fp)	1500km	Nov. 91
Brunei-Malaysia-Philippines (BMP)	Brunei, Malaysia, Philippines	1120Mbps (560Mbps x 2fp)	1500km	Jan. 92
TPC-4	Japan, U.S.A. (Mainland)	1680Mbps (560Mbps x 3fp)	5000km	Oct. 92
APC	Japan, Hong Kong, Taiwan, Malaysia, Singapore	1680Mbps (560Mbps x 3fp)	7600km	Aug. 93
Malaysia-Thailand (incl. Petchaburi-Sri Racha)	Malaysia, Thailand	1120Mbps (560Mbps x 2fp)	1500km	Aug. 94
Russia-Japan-Korea (RJK)	Russia, Japan, Korea	1120Mbps (560Mbps x 2fp)	1700km	Nov. 94
Thailand-Vietnam-Hong Kong (T-V-H)	Thailand, Vietnam, Hong Kong	1120Mbps (560Mbps x 2fp)	3400km	Nov. 95

Note 2: The very first giga bit submarine cable system in the world

SUPPLY RECORD - REPEATERED SYSTEM (3)

3rd Generation (Optical Amplifier System)

System	Landing Sites	Capacity	Route Length	Delivery
Malaysia Domestic (Southern Link)	Malaysia	10Gbps (5Gbps x 2fp)	2,300km	Jul. 95
Malaysia Domestic (Northern Link)	Malaysia	10Gbps (5Gbps x 2fp)	1,800km	Mar. 96
APCN	Korea, Japan, Taiwan, Philippines, Hong Kong, Thailand, Malaysia, Singapore, Indonesia	10Gbps (5Gbps x 2fp)	11,800km	Sep. 96
TPC-5	Japan, U.S.A. (Mainland)	10Gbps (5Gbps x 2fp)	24,500km	Dec. 96
Jasuraus	Indonesia, Australia	10Gbps (5Gbps x 2fp)	2,800km	Sep. 96
Fiber Optic Gulf (FOG)	Bahrain, Qatar, U.A.E. Kuwait	20Gbps (5Gbps x 4fp)	1,300km	Mar. 98

SUPPLY RECORD - REPEATERED SYSTEM (4)

4th Generation (Optical Amplifier System with WDM Technology)

System	Landing Countries	Capacity	Route Length	Delivery
SEA-ME-WE 3 Segment S3 (Note 3)	Singapore, Indonesia, Australia	40Gbps (2.5Gbps x 8wl x 2fp)	4,600km	Apr. 99
SEA-ME-WE 3 Segment S1 (Notes 3&4)	Korea, Japan, Taiwan, China, Hong Kong	40Gbps (2.5Gbps x 8wl x 2fp)	4,600km	Sep. 00
Southern Cross Cable Network	Fiji, New Zealand Australia, U.S.A.	640Gbps (10Gbps x 16wl x 4fp)	29,400km	Nov. 00
North Asia Cable System (NACS)	Hong Kong, Taiwan, Japan	2.52Tbps (10Gbps x 42wl x 6fp)	3,600km	May 01
Japan-US Cable Network	Japan, U.S.A. (Mainland)	640Gbps (10Gbps x 16wl x 4fp)	22,000km	Jul. 01
China-US Cable Network	China, Japan, Taiwan, Guam, Hawaii, Mainland, U.S.A.	80Gbps (2.5Gbps x 8wl x 4fp)	31,000km	Sep. 01

Note 3 The very first WDM submarine cable system in the world.

Note 4 The very first submarine cable system in the world employing O-ADM Branching Units.

SUPPLY RECORD - REPEATERED SYSTEM (5)

4th Generation (Optical Amplifier System with WDM Technology)

Continued

System	Landing Countries	Capacity	Route Length	Delivery
SEA-ME-WE 4 Segment S1	Singapore, Malaysia, Thailand, Bangladesh, Sri Lanka, India	1.28Tbps (10Gbps x 64wl x 2fp)	8,000km	Oct. 05
SEA-ME-WE 4 Segment S4	Egypt, Italy, Tunisia, Algeria, France	1.28Tbps (10Gbps x 64wl x 2fp)	3,400km	Oct. 05
Nagasaki - Okinawa	Japan	6.4Tbps (10Gbps x 80wl x 8fp)	900km	Aug. 09
Jaka2LaDeMa	Indonesia	0.96Tbps (10Gbps x32wl x 3fp)	1,800km	Apr. 10
Okinawa - Minamidaitō-jima	Japan	320Gbps (10Gbps x 16wl x 2fp)	450 km	Apr. 11
Hawk Cable System	France, Cyprus, Egypt	2.72Tbps (10Gbps x 68wl x 4fp)	3500 km	(France-Cyprus) Apr. 11 (Egypt segment) March. 12

SUPPLY RECORD - CAPACITY UPGRADE (1)

Capacity Upgrade of In-service Systems using WDM Technology

System	Landing Sites	Original Capacity	Capacity post Upgrade	Delivery
SEA-ME-WE 3 1 st 10Gbps Upgrade	China, Hong Kong	40Gbps (2.5Gbps x 8wl x 2fp)	55Gbps (2.5Gbps x 7wl x 2fp plus 10Gbps x 1wl x 2fp)	Jan. 03
FLAG Europe-Asia Upgrade Phase 1	Egypt, Jordan, Saudi Arabia, UAE	10Gbps (5Gbps x 1wl x 2fp)	20Gbps (5Gbps x 1wl x 2fp plus 10Gbps x 1wl x 1fp)	Sep. 03
FLAG Europe-Asia Upgrade Phase 3	UK, Italy, Egypt	15Gbps ((5Gbps x 1wl plus 10Gbps x 1wl) x 1fp)	25Gbps ((5Gbps x 1wl plus 10Gbps x 2wl) x 1fp)	May 05
SEA-ME-WE 3 2 nd 10Gbps Upgrade	Portugal, Italy, Greece, Turkey, Cyprus, Egypt, India, Sri Lanka, Thailand, Malaysia, Singapore, China	35Gbps x 5fp	Various (Original Capacity plus 25Gbps ~ 55Gbps x 5fp)	Dec. 05
FLAG North Asia Loop Upgrade III	Hong Kong, Japan, Taiwan, Korea	80Gbps (10Gbps x 4wl x 2fp)	290Gbps (10Gbps x 17wl x 1fp plus 10Gbps x 12wl x 1fp)	Jan. 06
FLAG Europe-Asia Upgrade Phase 4	Italy, Spain, Egypt, UK	10Gbps (5Gbps x 1wl x 1fp plus 2.5Gbps x 2wl x 1fp)	25Gbps (5Gbps x 1wl x 1fp plus 10Gbps x 2wl x 1fp)	Jan. 06
FLAG Europe-Asia Upgrade Phase 5	Egypt, India	5Gbps (5Gbps x 1wl x 1fp)	15Gbps (5Gbps x 1wl x 1fp plus 10Gbps x 2wl x 1fp)	Oct. 06

SUPPLY RECORD - CAPACITY UPGRADE (2)

Capacity Upgrade of In-service Systems using WDM Technology

System	Landing Countries	Original Capacity	Capacity post Upgrade	Delivery
FLAG Atlantic – 1 Segment A	USA(Crab Meadow) UK(Whitesands)	320Gbps (10Gbps x 16wl x 2fp)	320Gbps(10Gbps x 16wl x 2fp plus 230Gbps(10Gbps x 23wl x 1fp)	Jan. 07
FLAG Atlantic – 1 Segment C	USA(Long Beach) France(Saint-Brieuc)	320Gbps (10Gbps x 16wl x 2fp)	320Gbps(10Gbps x 16wl x2fp plus 230Gbps(10Gbps x 23wl x1fp)	Jan. 07
FLAG North Asia Loop Upgrade IV	Hong Kong, Taiwan, Japan, Korea	290Gbps (10Gbps x 17wl x 1fp plus 10Gbps x 12wl x 1fp)	450Gbps (10Gbps x 25wl x 1fp plus 10Gbps x 20wl x 1fp)	Feb. 07
SEA-ME-WE 3 3 rd 10G Upgrade	Portugal, Morocco, Italy, Egypt, Djibouti, UAE, Pakistan, India, Indonesia, Malaysia, Singapore, Vietnam, Philippines, China, Taipei, Japan	25Gbps ~ 85Gbps x 8fp	Various (Original Capacity plus 7.5Gbps ~ 42.5Gbps x 8fp)	Apr. 07
FLAG North Asia Loop Upgrade V	Hong Kong, Taiwan, Japan, Korea	450Gbps (10Gbps x 25wl x 1fp plus 10Gbps x 20wl x 1fp)	610Gbps (10Gbps x 33wl x 1fp plus 10Gbps x 28wl x 1fp)	May. 07

SUPPLY RECORD - CAPACITY UPGRADE (3)

Capacity Upgrade of In-service Systems using WDM Technology

System	Landing Countries	Original Capacity	Capacity post Upgrade	Delivery
FLAG Europe-Asia Upgrade Stage 2 Phase 1	UK, Spain, Italy, Egypt	25Gbps (5Gbps x 1wl x 1fp plus 10Gbps x 2wl x 1fp)	110Gbps (10Gbps x 5wl x 1fp plus 10Gbps x 6wl x 1fp)	Jul. 07
FLAG Atlantic – 1 Segment A	USA(Crab Meadow) UK(Whitesands)	320Gbps(10Gbps x 16wl x 2fp) plus 230Gbps(10Gbps x 23wl x 1fp)	320Gbps(10Gbps x 16wl x 2fp) plus 300Gbps(10Gbps x 30wl x 1fp)	Sep. 07
FLAG Atlantic – 1 Segment C	USA(Long Beach) France(Saint-Brieuc)	320Gbps(10Gbps x 16wl x 2fp) plus 230Gbps(10Gbps x 23wl x 1fp)	320Gbps(10Gbps x 16wl x 2fp) plus 300Gbps(10Gbps x 30wl x 1fp)	Sep. 07
FLAG North Asia Loop Upgrade VII	Hong Kong, Taiwan, Japan, Korea	610Gbps (10Gbps x 33wl x 1fp plus 10Gbps x 28wl x 1fp)	870Gbps (10Gbps x 45wl x 1fp plus 10Gbps x 42wl x 1fp)	Nov. 07
SEA-ME-WE 4 1 st Upgrade	Singapore, India	240Gbps (10Gbps x 12wl x 1fp plus 10Gbps x 12wl x 1fp)	520Gbps (10Gbps x 23wl x 1fp plus 10Gbps x 29wl x 1fp)	Sep. 07

SUPPLY RECORD - CAPACITY UPGRADE (4)

Capacity Upgrade of In-service Systems using WDM Technology

System	Landing Countries	Original Capacity	Capacity post Upgrade	Delivery
SEA-ME-WE 3 Add10G Upgrade	Hong Kong, Macau, Egypt, Turkey	2.5Gbps x 2fp	10Gbps x 2fp	Dec. 07
Japan-US 1 st Upgrade	Japan, USA	640Gbps (10Gbps x 16wl x 4fp)	Max. Segment 600G (10Gbps x 30wl x 2fp)	Mar. 08
PC-1 1 st Upgrade	Japan, USA	Max Segment 220Gbps (10Gbps x 5wl x 2fp +10Gbps x 6wl x 2fp)	Max. Segment 520G (10Gbps x 5wl x 2fp + 10Gbps x 21wl x 2fp)	Mar. 08
FLAG North Asia Loop Upgrade VIII	Hong Kong, Taiwan, Japan, Korea	870Gbps (10Gbps x 45wl x 1fp plus 10Gbps x 42wl x 1fp)	1030Gbps (10Gbps x 53wl x 1fp plus 10Gbps x 50wl x 1fp)	Jun. 08
FLAG Atlantic – 1 Segment A	USA(Crab Meadow) UK(Whitesands)	320Gbps(10Gbps x 16wl x 2fp) plus 230Gbps(10Gbps x 23wl x 1fp)	320Gbps(10Gbps x 16wl x 2fp) plus 300Gbps(10Gbps x 30wl x 1fp)	Jun. 08

SUPPLY RECORD - CAPACITY UPGRADE (5)

Capacity Upgrade of In-service Systems using WDM Technology

System	Landing Countries	Original Capacity	Capacity post Upgrade	Delivery
FLAG Atlantic – 1 Segment C	USA(Long Beach) France(Saint-Brieuc)	320Gbps(10Gbps x 16wl x 2fp) plus 230Gbps(10Gbps x 23wl x 1fp)	320Gbps(10Gbps x 16wl x 2fp) plus 300Gbps(10Gbps x 30wl x 1fp)	Jun. 08
FLAG Europe-Asia Upgrade Stage 2 Phase 2	Egypt, Jordan, Saudi Arabia, UAE, India	25Gbps (5Gbps x 1wl x 1fp plus 10G x 2wl x 1fp)	90Gbps (10Gbps x 5wl x 1fp plus 10Gbps x 4wl x 1fp)	Jun. 08
FLAG Atlantic – 1 Segment A	USA(Crab Meadow) UK(Whitesands)	320Gbps(10Gbps x 16wl x 2fp) plus 300Gbps(10Gbps x 30wl x 1fp)	320Gbps(10Gbps x 16wl x 2fp) plus 350Gbps(10Gbps x 35wl x 1fp)	Oct. 08
FLAG Atlantic – 1 Segment C	USA(Long Beach) France(Saint-Brieuc)	320Gbps(10Gbps x 16wl x 2fp) plus 300Gbps(10Gbps x 30wl x 1fp)	320Gbps(10Gbps x 16wl x 2fp) plus 490Gbps(10Gbps x 49wl x 1fp)	Oct. 08
FLAG Europe-Asia Upgrade Stage 2 Phase 3	India, Malaysia, Thailand, Hong Kong	10Gbps (5Gbps x 1wl x 2fp)	100Gbps (10Gbps x 5wl x 2fp)	Jan. 09

SUPPLY RECORD - CAPACITY UPGRADE (6)

Capacity Upgrade of In-service Systems using WDM Technology

System	Landing Countries	Original Capacity	Capacity post Upgrade	Delivery
FLAG Atlantic – 1 Segment A	USA(Crab Meadow) UK(Whitesands)	320Gbps(10Gbps x 16wl x 2fp) plus 300Gbps(10Gbps x 30wl x 1fp)	320Gbps(10Gbps x 16wl x 2fp) plus 430Gbps(10Gbps x 43wl x 1fp)	Aug. 09
FLAG Atlantic – 1 Segment C	USA(Long Beach) France(Saint-Brieuc)	320Gbps(10Gbps x 16wl x 2fp) plus 300Gbps(10Gbps x 30wl x 1fp)	320Gbps(10Gbps x 16wl x 2fp) plus 570Gbps(10Gbps x 57wl x 1fp)	Aug. 09
SEA-ME-WE 4 Upgrade #2	Singapore, India, Malaysia, Thailand, Bangladesh, Sri Lanka	240Gbps (10Gbps x 12wl x 1fp) plus 10Gbps x 12wl x 1fp)	1210Gpbs (10Gbps x 121wl x 1fp)	Apr. 09
Japan - US Upgrade #2	Japan, USA	640Gbps (10Gbps x 16wl x 4fp)	Max. Segment 570G (10Gbps x 57wl x 1fp)	Nov. 09
FLAG North Asia Loop Upgrade VIII	Hong Kong, Taiwan, Japan, Korea	870Gbps (10Gbps x 45wl x 1fp) plus 10Gbps x 42wl x 1fp)	1210Gbps (10Gbps x 59wl x 1fp) plus 10Gbps x 62wl x 1fp)	Nov. 09

SUPPLY RECORD - CAPACITY UPGRADE (7)

Capacity Upgrade of In-service Systems using WDM Technology

System	Landing Countries	Original Capacity	Capacity post Upgrade	Delivery
SEA-ME-WE 3 4th 10G Upgrade	Portugal, Morocco, Italy, Greece, Turkey, Cyprus, Egypt, Djibouti, Oman, UAE, Pakistan, India, Sri Lanka, Myanmar, Thailand, Indonesia, Malaysia, Singapore, Brunei, Vietnam, Philippines, Macao, Hong Kong, China, Taipei, Korea Japan	25Gbps ~ 85Gbps x 8fp	Various (Original Capacity plus 7.5Gbps ~ 42.5Gbps x 8fp)	Dec 09
FLAG Atlantic – 1 Segment A	USA(Crab Meadow) UK(Whitesands)	320Gbps(10Gbps x 16wl x 2fp) plus 300Gbps(10Gbps x 30wl x 1fp)	320Gbps(10Gbps x 16wl x 2fp) plus 590Gbps(10Gbps x 59wl x 1fp)	Mar. 10
PC-1 Upgrade#2 phase1	Japan, USA	Max Segment 520Gbps (10Gbps x 21wl x 2fp+10Gbpsx5wx2fp)	Max. Segment 720G (10Gbps x 31wl x 2fp + 10Gbps x 5wl x 2fp)	Jul. 10
Japan – US Upgrade #3	Japan, USA	640Gbps (10Gbps x 16wl x 4fp)	310Gbps (10Gbps x 31wl x 1fp)	Sep. 10
SEA-ME-WE 4 Upgrade #2+	Singapore, Malaysia	240Gbps (10Gbps x 12wl x 1fp plus 10Gbps x 12wl x 1fp)	60Gbps (10Gbps x 6wl x 1fp)	Dec. 10

SUPPLY RECORD - CAPACITY UPGRADE (8)

Capacity Upgrade of In-service Systems using WDM Technology

System	Landing Countries	Original Capacity	Capacity post Upgrade	Delivery
Kagoshima - Okinawa	Japan	150Gbps (2.5Gbps x 1wl x 6fp)	110Gbps (10Gbps x 11wl x 1fp)	Jan. 11
PC-1 Upgrade#2 phase2	Japan, USA	Max. Segment 720G (10Gbps x 31wl x 2fp + 10Gbps x 5wl x 2fp)	Max Segment 920Gbps (10Gbps x 41wl x 2fp + 10Gbps x 5wl x 2fp)	May. 11
Japan – US Upgrade #4	Japan, USA	640Gbps (10Gbps x 16wl x 4fp)	350Gbps (10Gbps x 35wl x 1fp)	Sep. 11
Japan – US Upgrade #4-2	Japan, USA	640Gbps (10Gbps x 16wl x 4fp)	80Gbps (10Gbps x 8wl x 1fp)	Mar. 12
PC-1 Upgrade#2 CV#5	Japan, USA	860Gbps (10Gbps x 38w x 2fp + 10Gbps x 5w x 2fp)	960Gbps (10Gbps x 43w x 2fp + 10Gbps x 5w x 2fp)	Sep. 12
Kagoshima - Okinawa	Japan	150Gbps (2.5Gbps x 1wl x 6fp)	110Gbps (10Gbps x 11wl x 1fp)	Dec. 12

SUPPLY RECORD – UNREPEATERED SYSTEM

Unrepeated System

System	Landing Countries	Capacity	Route Length	Delivery
National Digital Transmission Network	Philippines	15Gbps (2.5Gbps x 6fp)	1,300km	Feb. 99
Korea-Japan Cable Network (KJCN)	Korea, Japan	2.88Tbps (10Gbps x 24wl x 12fp)	500km	Feb. 02
Fiber Optic Backbone Network (FOBN)	Philippines	3.84Tbps (10Gbps x 32wl x 12fp)	1,300km	Jul. 03
Okinawa - Miyako-jima	Japan	160Gbps (10Gbps x 8wl x 2fp)	340km	Mar. 05
Miura - Hachijō-jima	Japan	640Gbps (10Gbps x 8wl x 8fp)	280km	Aug. 08