

# **Building a Global Virtual Organization: GIVN at Cable & Wireless**

by Judah J. Levine

A research paper (case study) submitted in fulfillment of the requirements for 3 credits,  
GRADUATE INDEPENDENT RESEARCH PROJECT Winter Term 1998, Professor  
C.K. Prahalad, Faculty Supervisor.

Faculty Comments

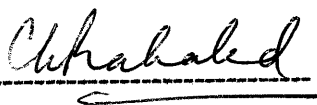
**Mr. JJ Levine's Paper:**

*Building a Global, Virtual Service Organization: The Case of GIVN at C&W*

The case represents a significant amount of work. It has involved difficult data gathering and analysis as well clear conceptual contribution. The case represents an emerging problem- the process of building a global network of organizations dedicated to delivering complex and ever changing service such as telecom. The central issues are: Global service, Turbulent industry structures and Virtual organization. GIVN represents the complexities when one undertakes to combine all three.

The project required significant overseas travel (U.K., Australia, Hong Kong, Japan) to collect data, difficult clinical work (interviews) and a significant amount of work to analyze and structure the information. The work is lot more than can be expected from a 3 credit hour course.

The concepts developed here are important and somewhat new to the area of strategic thinking. This is a good piece of research.

A handwritten signature in cursive script, reading "C.K. Prahalad", is written above a horizontal dashed line. A small arrow points to the right from the end of the dashed line.

C.K.Prahalad  
Harvey C. Freuhauf Professor of Business  
Administration



## Building a Global Virtual Organization: GIVN at Cable & Wireless

*To deliver integrated communications, you need to 'own' the customer. If you don't, your service will always be hostage to what someone else allows you to deliver.*

—Dick Brown, CEO, Cable & Wireless plc

David Sexton looked to April 1, 1998, with a mix of excitement and trepidation. Only a year earlier, he had assumed the helm of Cable and Wireless Business Networks (CWBN), a strategically important yet financially-troubled business unit of British-based communications firm Cable and Wireless plc (C&W). Now his grand vision for revitalizing CWBN was about to enter a critical stage of implementation. (See appendix for Glossary of Terms.)

For ten years, CWBN had struggled to define its mission, intermittently shifting its role between that of wholesale developer of products for C&W's regional business units and seller of retail propositions to large multinational customers. Soon after his arrival, Sexton announced a daring plan to split CWBN into two distinct units, one product-focused and another sales-focused, thereby eliminating much of the confusion within the organization. Sexton would remain in charge of relationship marketing to global customers in the rebranded Cable and Wireless Global Markets (CWGM), while wholesale services would be spun off to the newly created Global Network Organization. But in order to make this reorganization work, it was necessary to reconceive the operating relationship between C&W and its regional phone companies. On April 1, Sexton would become a man in control of his own destiny; as on that date, everything that did not constitute a national business would be brought together into a single global organization under the charge of one C&W director. Sexton's CWGM would take ownership of key multinational clients from regional business units and have free reign to market integrated communications solutions on a worldwide basis.

Dick Brown, Chief Executive Officer of C&W, lauded Sexton's plan. In a speech to a brokerage house in March, 1998, Brown explained:

With a single brand and a single dedicated management team [Business Networks] will target multinational companies directly instead of operating through the national companies. It will therefore be leaner, more focused and — dare I say it? — more effective in serving our customers than an alliance of different companies trying to do the same

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*Graduate Business Student Judah J. Levine prepared this case under the supervision of Professor C.K. Prahalad as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.*

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thing...[W]ith our new Global Network Organization, the capital program for the international network will be centrally controlled as we optimize our international activities in a global way. The objective is a rational, coherent, integrated, state-of-the-art global network touching more places on earth than any other. No one has yet done it, despite the efforts of numerous alliances to get such a network up and running.

Sexton was pleased with Brown's accolades, but he realized that he would need to translate his strategic vision into tangible profits to justify such praise. Sexton surmised that CWGM faced three immediate tasks: deciding on a viable target market; developing a value proposition, i.e., comprehensive communications solution to address this market; and, delivering the solution in a satisfactory way to the customer. While independently challenging on a regional or national basis, these issues were ever more complicated to resolve when addressed in a global context. Sexton needed to conceive of a business model that would allow CWGM to retain and develop business in an era massive uncertainty and instability; successive waves of deregulation around the world, technology innovations, and sector consolidations rendered traditional long-term planning an activity of dubious value within the telecommunications industry.

Contemplating how best to address this challenge, Sexton was reminded of a meeting he had held earlier in the day with Aki Debayo-Doherty, Project Director of Global Intelligent Virtual Network (GIVN), a globally managed switched voice and data service recently launched by CWBN. Debayo-Doherty's team had achieved a remarkable accomplishment in piecing together GIVN from existing switching facilities and strategic alliances to create arguably the most cost-effective, no-frills global virtual private network (VPN) available on the market. Over the course of 30 months, Debayo-Doherty had proven adept at weaving an intricate web of variegated personalities, relationships and interests, which culminated in the introduction of a sophisticated global product. Looking over a report Debayo-Doherty had submitted, Sexton wondered whether lessons learned in the development of GIVN could be used to articulate a global strategy for CWGM — one that would both address current market conditions, and anticipate factors that promised to alter significantly the face of global communications.

## **Cable and Wireless plc (C&W)**

Established in 1872 in London, the Eastern Telegraph Company represented an amalgamation of a number of important smaller telegraph companies. The company developed a large network of telegraphs by creating new routes and doubling and even trebling cables on busy existing routes. Early in the 20<sup>th</sup> century, the Eastern became part of the Eastern and Associated Telegraph Companies, which incorporated several other telegraph companies from around the world. In 1934, Imperial and International Communications, formerly the Eastern Telegraph Company, became Cable & Wireless. The 1979 general elections in the UK gave rise to a new Conservative Government. The latter professed both in word and in deed a commitment to free market economics and a program of privatization. Due to its long history in the private sector, C&W was a natural choice for the first wave of privatization. As part of a general plan to liberalize telecommunication and postal services, C&W was privatized in November 1981.

After several years of struggles with bloated bureaucracy and lackluster financial results, C&W emerged as a fiercely competitive public telecommunications operator in the early 1990s. Following the appointment of Dick Brown, an American with two decades of experience in the US telecommunications industry, to the post of Chief Executive in 1996, C&W underwent a remarkable transformation. In an effort to lead the world in integrated communications, C&W undertook several bold moves in 1997. These included the launch of Cable & Wireless Communications in the UK, the sale to China of a stake in its prize possession Hongkong Telecom, and the accumulation of majority ownership in Australia's second largest carrier, Optus. C&W also acquired a controlling stake in C&W Panama, giving it management control and an invaluable launch point into Central and Latin America. Brown has sought to strengthen and deepen the ranks of the company's management team, and has instituted a universal incentive scheme

for senior employees, with the aim of fostering a one-firm approach in all markets in which C&W companies compete.

At present, C&W, a worldwide alliance of companies, is a leading provider of international communications services. (See **Exhibit 1** map of C&W Global Operations.) Its businesses provide 15 million customers in 70 countries with a complete range of international, domestic and mobile communications. C&W is the world's third-largest carrier of international traffic, provides mobile communications in more than 30 countries, and operates the world's largest, most advanced cable ship fleet. While focused on increasing shareholder value, Brown is determined to reshape C&W in the mold of a customer-driven, globally responsive organization that takes full advantage of new business opportunities.

### **Global Intelligent Virtual Network (GIVN)**

Multinational Corporations (MNCs) are seeking to improve their competitiveness by implementing business systems that reduce costs and enhance market differentiation. As part of this trend, MNCs are increasingly requesting managed global telecommunications solutions from a single supplier. C&W has responded to this trend by developing a range of global managed services, including managed bandwidth, data, and voice products.

GIVN is the brand name for a Virtual Private Network (VPN) service offering from Service Partners of the C&W Group and Tele Media International, launched in September 1997. The product is an integrated switched voice and data service — globally managed by the GIVN Service Partners — that delivers the key features and flexibility of a private network, together with the reliability, capacity and cost efficiency of the public switched network. (See **Exhibit 2** GIVN Feature Description.) The network infrastructure utilized by C&W and its global service partners for delivering GIVN exploits to the greatest extent possible existing assets and capabilities. The initial geographic rollout of GIVN covered the USA, UK, Germany, Hong Kong, Japan, and cities in France, Italy, and Switzerland. These eight markets represent over 90% of the total global market for international VPN services. Within one year of launch, GIVN is expected to cover Australia, Sweden, and cities in Netherlands, Belgium, Spain, Ireland, Austria and Denmark as well.

Since GIVN is serviced from C&W, the customer gains several benefits: from single point ordering, managed implementation, superior service management, and flexible billing. With the market for global VPN becoming increasingly competitive and since technology is not proprietary, competitors seek to differentiate themselves primarily on quality of service, rather than number of features. GIVN represents an early experiment in C&W's corporate strategy for global branding and marketing of telecommunications services, with particular emphasis on high-margin, long-term business customers. C&W aims to differentiate GIVN from its competition by way of its robust breadth and depth of coverage, as well as high-quality customer service.

### **Market for Global VPN Services**

The global market for international VPN services is approximately \$1.3 billion per year and is growing at an annual rate of 33%, reaching \$2.3 billion in 2005. The USA is the largest market for international VPN services, accounting for over 60% of total global spend. Following recent deregulation, it is now possible for any telecommunications operator to gain entry — either by building its own facilities or by reselling the capacity of other carriers — to virtually all of the major international VPN markets. (See **Exhibit 3** Summary Regulatory Country Analysis.) VPN has become a key competitive weapon in the battle for market share in international voice and data services, and is aggressively priced in almost all

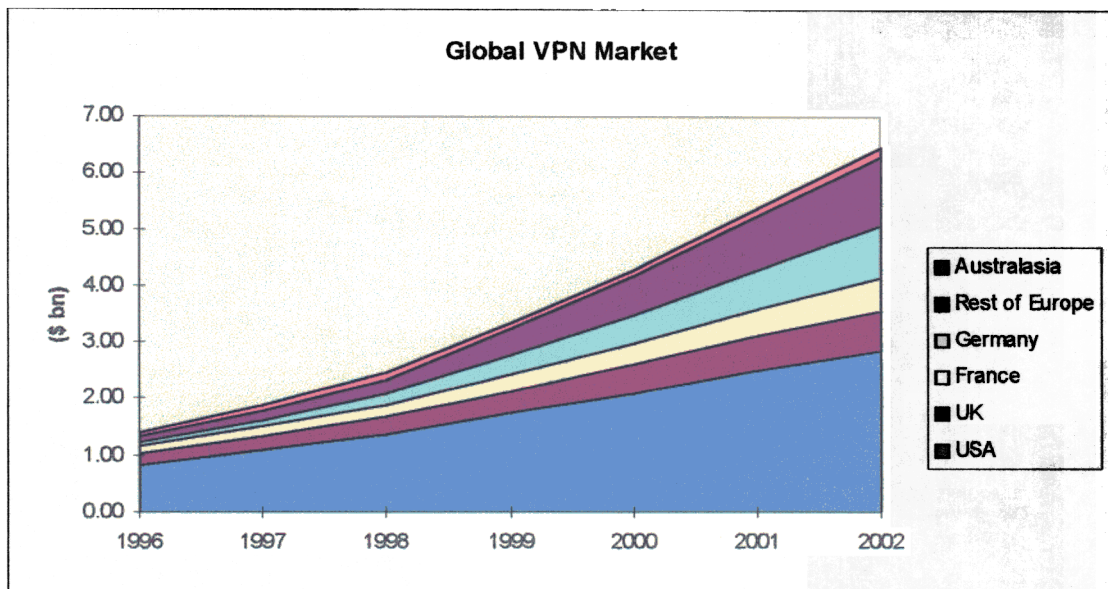
markets to give major customers very substantial discounts on call charges (typically, 40% off standard international direct dial rates).

MNCs feel that they have paid dearly for international voice for too long. It is not surprising, then, that they have come to favor VPN solutions, which not only give them global discounting by bundling all of their traffic, but also require less network management by them. Since VPN is deregulating more rapidly than other voice services, many carriers have used VPN as a competitive stylus to penetrate new geographical markets. For this reason, major customers often view VPN as an acid test of a carrier's ability to provide competitive managed services.

Penetration of international VPN services varies significantly by geographical market. This is the result of variations in penetration of domestic VPN service, regulatory structure, and customer buying preference. VPN has been most successful in highly deregulated markets where the most price sensitive customers prefer variable cost ("pay per drink") telecommunications solutions. It is anticipated that 60% of MNCs will have adopted VPN services by the year 2000 and that the average spend per customer will increase from \$3.0 million in 1995 to \$5.5 million per year by 2002.

The US will remain the largest individual market for outgoing international traffic minutes, as it houses the headquarters of a high proportion of the world's MNCs, but it is expected that the European market will achieve similar size over the next two years. The UK and France currently account for 40% and 30% of the European market, respectively, reflecting the relatively advanced nature of the dominant telcos' VPN services. By 2002, though, the inequalities within the rest of Europe will level out, with Germany becoming the largest single market (28%) in Europe. The UK and France will have similar market shares (18% and 15%, respectively); the Italian and Spanish market will be fastest growing; while the rest of Europe, with their smaller, less developed markets, will show lower growth rates. (Source: Ovum)

Figure 1: Global VPN Market Revenue Forecast



Source: Ovum (includes CWBN estimates for Japan)

**Customer Segmentation**

There is no clear data to suggest that penetration of VPN services varies significantly by industry sector, although some anecdotal evidence suggests that companies with a high confidentiality requirement, particularly financial services companies, prefer the apparent greater security of a private network. VPN is more likely to appeal to a company that makes a high proportion of internal calls: for example, a

manufacturing company that needs to communicate between plants, warehouses and sales offices. VPN is less likely to appeal to a company that makes a high proportion of calls to or from third parties: for example, an insurance company dealing with claims from customers. There is, however, evidence that some companies are beginning to use VPNs to provide sophisticated call management in support of international call center and service management operations. Most customers who purchase VPN services are looking for low prices (including global discounts) and wide geographical coverage (many countries covered). Some customers are also looking for “ease of doing business” at a global level: these customers are typically interested in service features like global billing, one-stop-shopping and global service management.

GIVN will particularly target:

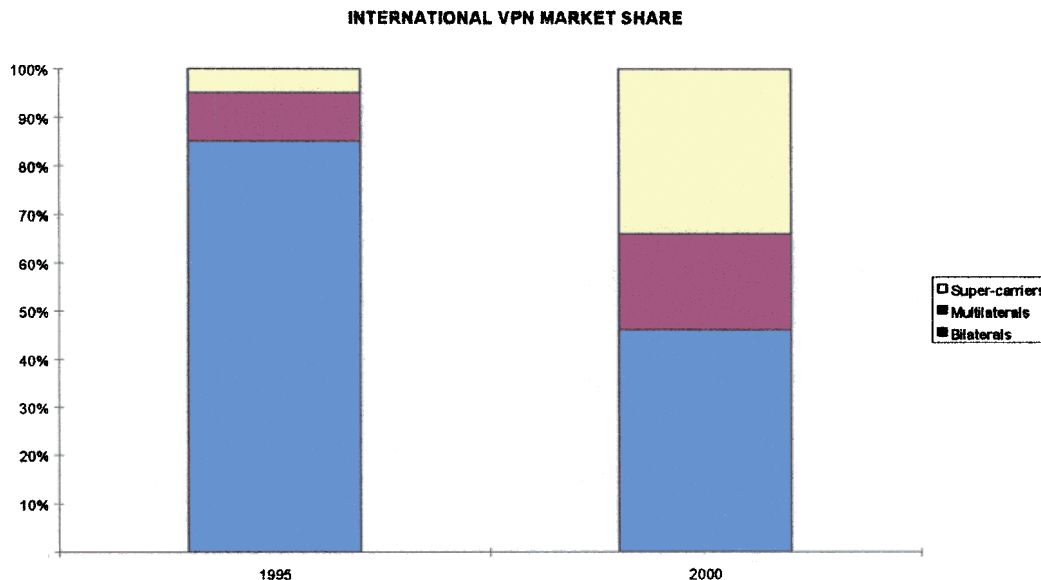
- existing customers of domestic VPN services provided by GIVN Service Partners;
- existing customers of other C&W global managed services;
- companies that have a particularly close match with the geographies where GIVN has the greatest depth of coverage; and,
- companies in industry sectors which are the primary focus of C&W Service Partners

**Competition**

As the VPN market has grown, operators have entered into bilateral agreements to interconnect domestic VPNs with those operated by other carriers. While these arrangements provide customers with a form of international VPN service, they are not capable of fully supporting certain customer requirements, including seamless global service, one-stop shopping, global billing and global discounting. Several attempts to resolve these issues through multilateral agreements have met with only limited progress.

All of the major, so-called, “supercarrier” alliances (WorldPartners, Concert and Global One) have responded to this market shift by developing what they claim to be a seamless end-to-end international VPN product. Apart from enabling the super-carriers to both retain and attract high-value MNCs, alliances are being used as an entry strategy to emerging domestic voice markets. International vendors that are not aligned with the existing global alliances are already feeling the pain of increased competition as their MNC customers are being targeted by vendors offering a new service and cost proposition that they cannot yet match.

**Figure 2: International VPN Market Share, 1995 & 2000**



Source: CWGM Estimates

There are, then, three distinct types of competitors supplying international VPN services:

- domestic VPN suppliers supplying international VPN through bilateral relationships with operators in other countries (“Bilaterals”)
- domestic VPN suppliers supplying international VPN through a multilateral relationship with a group of operators in other countries (“Multilaterals”)
- global supercarrier alliances (“Supercarriers”)

Supercarriers currently serve about 20% (author’s estimate) of the international market and are expected to rapidly increase this share over the next three years, capturing about 35% of the total international VPN market. The principle supercarrier competitors are AT&T WorldPartners, BT/MCI Concert and Global One, although WorldCom has made strides to enter this market as well. Each of these alliances has implemented an aggressive strategy to achieve significant market share in international managed services. Each has an international VPN offering as a major element in its global service portfolio. (See Exhibit 4 Global VPN Comparative Tables.)

Table 1 below lists the current equity shareholdings in the global alliances. In addition to partners who have invested equity, other providers have entered into distribution agreements with alliances. (Note: as GIVN is a product, not a separate company, Service Partners, rather than shareholdings, are shown).

Concert ♦ (% shareholding)	WorldPartners ♥ (% shareholding)	Global One (% shareholding)	GIVN Ω Service Partners
BT (75.1%)	AT&T (USA, 40%)	Sprint (50%)	TMI (Italy)
MCI (USA, 24.9%)♣	KDD (Japan, 24%)	France Telecom (25%)	CWC (UK)
	Singapore Telecom (16%)	Deutsche Telecom (25%)	HKT (Hong Kong)
	Telia (Sweden) ♣		IDC (Japan)
	PTT Netherlands ♣		CWI (USA)
	Swiss PTT ♣		

♦ Telefonica left the Unisource alliance in April 1997 to partner with Concert; however, it recently cancelled the planned equity swap due to the MCI withdrawal and now plans to partner with WorldCom.

♣ BT has a call option on these shares following the WorldCom takeover.

♣ Indirectly held through the Unisource alliance, which is equally split between the PTTs of Sweden, Holland & Switzerland. A third entity, Uniworld, refers to the alliance between Unisource and AT&T.

♥ Non-equity members include: Korea Telecom, Philippines, Telstra (Australia), HKT, Telecom New Zealand and Unitel (Canada). Telstra are reported to be seeking an equity stakeholding.

Ω Anticipated future GIVN partners include: Optus (Australia), Tele2 (Sweden), o.tel.o (Germany) and ONSE (South Korea).

**WorldPartners**, launched in May 1993 by AT&T, is an alliance of major telecommunications operators that provides seamless global services for MNCs. Alliance services include VPN, frame relay, and managed bandwidth. WorldPartners has excellent geographical reach and a strong global brand but is perceived as a non-equity “loose” alliance. It targets large MNC customers in North America, Europe and developing countries (China, South America, Central America) that have previous experience with VPN and integration of voice and data. WorldPartners has adopted the slogan “Global reach, local grasp,” reflective of its aim to partner with the dominant local telco with the largest network in each country it seeks to enter.

**Concert**, formed in October 1994, is a joint venture (75% BT, 25% MCI), which seeks to provide its MNC customers with seamless global services and a single point of contact responsible for network maintenance and customer service. Concert’s portfolio of services includes VPN, managed data (low and



high-speed packet switching and frame relay), managed bandwidth, messaging, electronic data interchange, electronic mail, and video-conferencing. Concert VPN is an integration of BT FeatureNet (UK domestic VPN), BT Cyclone (European VPN), and MCI VNet (US domestic VPN). Concert is strong in both the US and UK, but it lacks credible partners in the Far East. It is aggressively targeting top 1000 global MNC customers, with a particular focus on the hi-tech, finance and manufacturing sectors. Its most recent revenue figures amounted to annual sales of \$1.75CWB. Following WorldCom's October 1997 announcement of its successful bid to purchase MCI, BT confirmed that it would seek another US partner once the deal is finalized. Although WorldCom-MCI will continue to distribute Concert services for five years, the future for Concert remains uncertain.

**Global One** was formed in June 1994, with the objective of being "the principal embodiment and global reference point of the International Telecommunications Services Business of the owners". The relationship was cemented by the purchase of a 20% stake in Sprint by FT and DT. Global One offers VPN, frame relay, packet switching, internet access and other data and voice services. Global One is very strong in the US, German and French markets but lacks a credible presence in many other markets. Global One is aggressively targeting large US MNC customers, offering domestic US calls for as little as \$.04 per minute. Global One reportedly targets not only MNCs, but regional telecommunication companies as well, particularly in the Asia-Pacific region. Global One's sales are split 25-35% to carriers, 50% to corporate clients and the remainder to residential customers. The company focuses its effort primarily on the finance, retail, IT, manufacturing and professional services areas.

**WorldCom** has emerged as a formidable competitor to the existing global alliances over the past couple of years. WorldCom's entrepreneurial management team has shown a knack for adeptly navigating the waves of regulatory and technological changes sweeping the telecommunications industry. The company owns local access fiber network in major cities (and business districts) in US and Europe and a range of communications businesses, allowing it to deliver high quality, seamless service wherever it operates. Although it does not yet have the depth of global presence that MNCs require, WorldCom has been actively addressing this issue by absorbing rival companies (e.g. MCI), engaging in strategic ventures, and expanding its network infrastructure into new geographies. WorldCom has made approximately 80 acquisitions, including MFS and Uunet to provide city telephony services and Internet services, respectively. At present, WorldCom is the fourth largest long distance player in the US and, with the acquisition of MCI, has the potential to become a major player in the global market.

## Overview of GIVN Service Partners

Phase one development of GIVN was directed by CWGM and supported by four core C&W Group equity partners: Cable and Wireless Communications (UK), Hongkong Telecom, International Digital Corporation (Japan), and Cable and Wireless Incorporated (USA). In order to offer coverage throughout Continental Europe, C&W partnered with Tele Media International, a division of Telecom Italia. In the future, GIVN geographic coverage will be expanded with the cooperation of Optus (Australia), Tele 2 (Sweden), o-tel-o (Germany) and potentially other C&W equity companies.

### *Cable & Wireless Communications (CWC)*

Cable and Wireless plc, Nynex Corporation and Bell Canada International reached an agreement in May 1997 to merge Mercury Communications, Nynex CableComs, Bell Cablemedia and Videotron into a single company known as Cable & Wireless Communications. The purpose of the merger was to create the first company with a national network designed to offer integrated telecommunications and cable television services in the UK. Mercury Communications was granted a Public Telecommunications Operator license in 1984, which marked the end of British Telecom's monopolistic position in the UK telecommunications market. CWC provides a full range of telecommunications services including voice and data transmission, messaging services and mobile communications and services to over a million business and residential customers.

Table 2 below lists all of the Phase I partners and Optus of Phase II, along with their equity relation to C&W, and identifies their original impetus for participating in GIVN.

Service Partner	Shareholding by C&W	Expectation of GIVN
CWC	50%	-Meet customer demand for global VPN service
CWI	100%	-Support C&W Group initiative -build domestic VPN
HKT	58%	-Meet anticipated future demand for global VPN service -Support C&W Group initiative
IDC	17.6%	-Extend existing International VPN service capabilities
Optus	49% (w/ option for 52% after public floatation)	-Launch competitive global VPN service in home market -Support C&W Group initiative
TMI	0%	-Gain access to new MNC customers -Extend geography and functionality of existing network

***Cable & Wireless Incorporated (CWI)***

CWI, a fully-owned subsidiary of C&W, is the United States' largest long distance provider exclusively serving businesses, with approximately three per cent of the business telecommunications market. CWI provides a complete portfolio of domestic and international voice, data, and message services via an all-digital, fiber-optic network stretching from coast to coast.

***Hong Kong Telecom (HKT)***

HKT is Hong Kong's only full service telecommunications provider and is a major power in Asian communications, maintaining ten offices in seven countries. The company offers a full range of services, including basic telephony, mobile telephony, international calls, specialized fax and data products, value-added services, interactive multimedia and TV, satellite links as well as telecommunications equipment and systems. C&W holds a 58% equity position in HKT; however, a June 1997 deal signed with China Telecom will require C&W to sell at least 5.5% of its shares in the next few years. HKT has enjoyed robust profits in recent years, raking in HK\$13 billion (about \$7.6 billion) in the fiscal year ending 31<sup>st</sup> March 1997.

***International Digital Communications, Inc. (IDC)***

IDC is one of three "Type 1" providers of international telecommunications services in Japan. It commenced leased circuit and telephone service in 1989 and has an expanding service portfolio including VPN, ISDN, Cards and C&W G-Products. C&W has a 17.58% shareholding in IDC.

***Optus Communications (Phase 2 GIVN Service Partner)***

The Federal Government established Optus in January 1992, following major deregulatory initiatives of the Australian telecommunications market. Since then, Optus has built a world-class telecommunications network comprising three primary network components — wireline, mobile and satellite. It has a fully digital fixed network, based on ultra-modern SDH technology. Optus services include long distance telecommunications services and mobile communications services, enhanced communications and business network services to homes and businesses. Following a deal in August 1997 in which it acquired the BellSouth Corporation's 24.5% stake in the company, C&W shareholding in Optus now stands at 49%. As part of that transaction, the Australian shareholders granted options to C&W, which will lift C&W's shareholding in Optus to approximately 52% following a planned public float in 1998.

***Tele Media International Ltd (TMI)***

TMI is a wholly owned subsidiary of Telecom Italia, which provides a wide range of global telecommunications services to business customers on a worldwide basis. It operates in the area of deregulated value-added and network services, as well as outsourcing applications. In the wake of the creation of Telecom Italia, TMI is the company within the group with responsibility for customer operations outside the Italian borders.

## The Long Road to Launch

From 1989 to 1994, C&W was an active participant in a multilateral initiative known as GlobalFon, which utilized a single switch platform to provide consistent global VPN features. In addition to the C&W carriers (CWC, HKT and IDC), the GVPN alliance included Sprint, Unitel, Teleglobe, Telecom Netherlands and Telstra of Australia. A global service center was established and plans were developed, though never implemented, to allow global one-stop shopping. As the international strategies of a number of participants diverged, however, GVPN became an increasingly unsustainable vehicle. Deregulation in the UK allowed Sprint to acquire its own license, reducing its incentive to cooperate with C&W. Rolling out a proprietary network globally was cost-prohibitive, creating a disincentive to expand. Further, GlobalFon was positioned as "PSTN plus", a premium pricing structure, which rendered it noncompetitive after a deregulation-led erosion in international rates. The GVPN alliance was formally disbanded in November 1995, and GVPN routes are now managed on a traditional bilateral basis. Reflecting on the demise of GlobalFon, Debayo-Doherty noted: "Having a VPN operate over an overlay (dedicated) network is like creating an airline that flies only business class. Simply put, there are not enough customers to justify the premium charged for the service, no matter how rich and durable it might be."

Between GVPN and GIVN, three attempts were made to launch a more competitive global VPN. These efforts failed for a host of reasons. While people involved in the earlier development efforts demonstrated a knack for identifying key issues and problems with building a global VPN, they did not have a sufficient grasp of the organizational requirements of offering such a service. Key Service Partners HKT and CWC disagreed over how best to assemble a cost-effective network that would allow for seamless delivery of certain value-added core features. HKT and CWC still competed in relatively regulated markets, which rendered them inwardly focused on development priorities. At one point, an internal CWC reorganization brought the global development of GIVN to a halt. This and other such incidents were borne of the fact that C&W lacked a cohesive strategy to address the MNC customer base across its group of operating companies. Since consensus management was the order of the day, CWBN was unable to articulate a vision for a global VPN service to which all Service Partners would agree. Chinyelu Onwurah, Manager of GIVN Service Delivery and the only member of a prior GIVN Team to be retained by Debayo-Doherty, commented on the frustration of that period:

I felt that a major failure on the part of that team, was an inability to resolve the critical conflict between action and consensus, given the lack of direct authority over the Service Partners. We spent an incredible amount of time trying to find out what the Service Partners wanted — half the time they didn't know themselves — and hoping that they would agree about it.

Without strong leadership and mediation from CWBN, plans to launch GIVN were hampered by squabbling among C&W Service Partners over such issues as value transfer mechanisms, sales responsibility, and resource allocation for development costs. In this environment, many who worked on developing GIVN acknowledged tacitly that the project would never come to life.

## Establishing the Ground Rules

When he was offered the job of GIVN Program Manager in mid-1996, Aki Debayo-Doherty realized that he would need to tackle the problem of building a global VPN from scratch. Upon arriving in London from Vienna, Virginia, where he was Chief of North American Sales for CWI, Debayo-Doherty set out to assemble a new product development team. He chose colleagues from across the C&W organization, seeking people with the necessary experience, skills and enthusiasm to take on a project of such

technological and organizational complexity. Backed by a strong vote of confidence from the CEO of CWBN, the newly-assembled GIVN Team began its work by establishing a set of premises that would guide the development process and reduce turf wars among the Service Partners. First, CWBN would not account for disparate market environments (in terms of regulation and competition) in determining how the Service Providers would share GIVN costs and revenues. In rejecting a traditional value transfer mechanism model, CWBN made clear that each Service Partner needed to participate commensurate with the benefit it would gain from GIVN. Second, every "A-end" would act as a "B-end" and vice versa; under this arrangement, each service partner would be required both to sell and deliver traffic on the GIVN network. Third, each service partner would bear responsibility for local resource allocation and investment to develop network capability, and would keep revenues emanating from their own territories. As part of this stipulation, partners would be required to contribute licensing fees (central cost recovery) and ongoing costs of global service management activities to CWBN. When combined, this set of principles was intended to encourage the Service Partners to share equitably in developing, selling, and profiting from the new service.

As Debayo-Doherty saw it, the key challenge in building a successful GIVN alliance was getting a group of disparate organizations to work together, focus on one another's needs, and extend this attitude to customers that wants to buy from a global entity. (See Exhibit 5 Global Virtual GIVN Team, across Phase I and II Service Partners.) The CWBN GIVN Team tackled this problem, according to Debayo-Doherty, by creating "a core competence in the middle that allowed everyone to borrow skills from a central source to augment their learning." (See Exhibit 6 CWGM Senior Management and GIVN Team.) CWBN had no choice but to work with C&W Group countries, since they had facilities-based service provider licenses and worked to make the most of existing infrastructure. While Debayo-Doherty was busy negotiating the basic terms of cooperation with the Service Partners, the core GIVN development team went about conceiving and documenting the processes and service specifications that were to be at the core of the GIVN service proposition. These included:

- Global Product Specification
- Global Billing Strategy and Billing Interface
- Global Network Design and Tests
- Development of central systems
  - a. Global Dial Plan Manager
  - b. Global Reporting Engine (tabulates local bills into one report)
  - c. Global Proposal Generator
  - d. Global Sales & Bid Process
- Alpha testing of all systems and processes (include. Service Management)
- Beta testing with a live customer in as many geographies as possible
- Training curriculum to support Service Partner sales

The Service Partners needed to sign their approval on the documents as they were produced; however, they were encouraged to offer comments and suggestions throughout the drafting stages.

## **Building a Global Backbone**

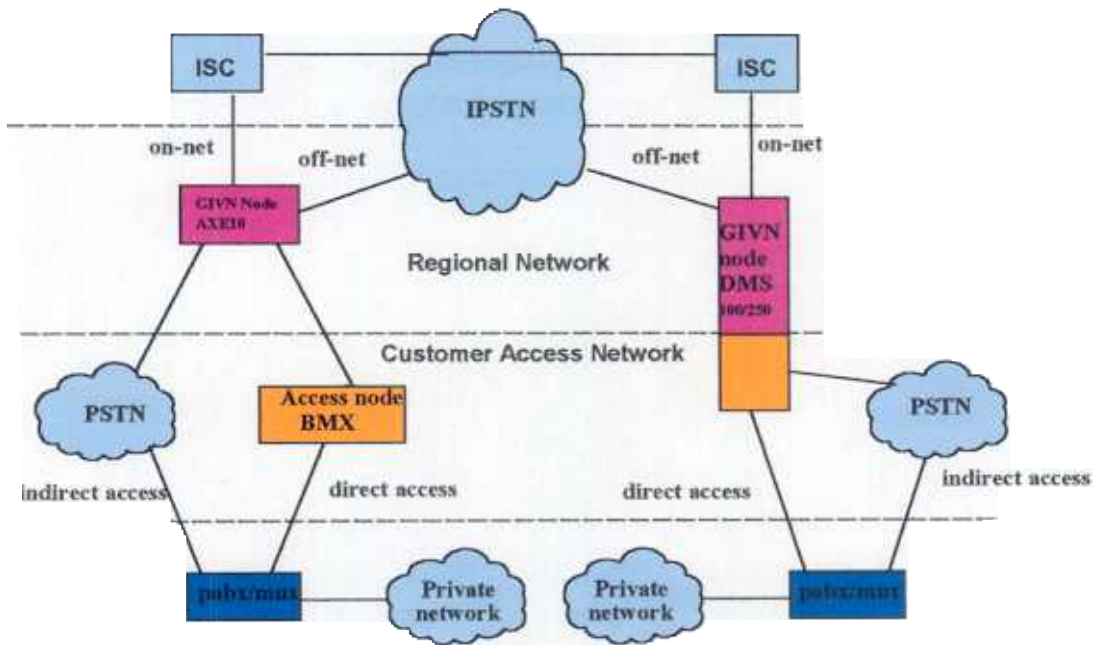
One of Debayo-Doherty's first appointments was that of Kingsley Abeynayake, an engineer and industry veteran, to lead the design and construction of GIVN infrastructure. Having previously participated in a costly and, ultimately, money-losing CWGM VPN effort, Abeynayake determined that GIVN's construction must make maximum use of existing C&W and Service Partner infrastructure, thus minimizing the capital expenditure on the project. Debayo-Doherty and Abeynayake agreed that the key to guaranteeing GIVN's success was to maximize existing bandwidth and switching capabilities, without investing in costly features that the market would not necessarily bear. According to Abeynayake, "private networks and old VPNs were

constructed like Bentleys and priced as such. In GIVN, we were seeking to build a Ford — reliable, long-lasting, yet cost effective.”

Contemplating alternative network designs for GIVN, Abeynayake needed to make a difficult decision: to go with a proven, yet expensive overlay network, or to opt for extending industry-mandated bilateral standards to a multilateral environment — a cost-effective, yet risky proposition. After considering various technological and regulatory issues and assessing the future direction of the market, Abeynayake settled on a unique **Global Network Design**, which leverages existing infrastructure where possible. The GIVN architecture comprises three network layers: the backbone of International Switching Centers (ISCs), the regional GIVN nodes and customer access.

The backbone network is formed by the Service Partner ISCs and is used to transport GIVN calls between Service Partners’ networks. To ensure maximum resilience and quality, the backbone network is integrated with the international public switched network wherever possible. Open signaling systems ensure that additional Service Partners and platforms can be integrated easily, regardless of the national infrastructure. The ISCs are networked using a common signaling system, which enables a consistent feature set to be offered around the world. The regional network consists of the GIVN nodes interconnected with the Service Partners’ existing national and international VPN services. The customer access network provides customer connections and local signaling protocols. GIVN supports direct dedicated, direct shared and switched access.

**Figure 3: GIVN Backbone Network**



It is important to note that most phone networks operate at an approximately 14 percent utilization at all but peak times. GIVN and similar products aim at increasing utilization of assets through aggressive pricing that shifts demand to off-peak time; the variable cost associated with such a strategy is minimal. In venturing to explain the unique challenge he faced in creating the GIVN Global Network Design, Abeynayake made reference to the airline industry:

Unlike airlines, which schedule flights only once demand is proven, in telecommunications, global cables are pre-laid and then demand is sought out. Thus, it is critical to construct a network, which can be manipulated and adjusted to meet a host of possible future demand requirements. With GIVN, we chose a flexible design that allows calls, rather than the circuits, to be tagged. Imagine, if you will, that you — the customer — arrive at the airport only to find that the exteriors of all planes bear similar colors and designs. Customers would receive a certain class of treatment on the basis of certain tagging features — say a bright blue shirt that they wear — that would allow the carrier personnel to identify them.

GIVN nodes allow for a seamless interconnection of the public switched network and customer sites. By tagging GIVN calls with unique numbering schemes, the Service Partners are able to offer their clients many of the best features of a private network at only a fraction of the cost.

The Service Partners accepted Abeynayake's network design with little debate. Most needed to make slight modifications to their existing VPN products in order to plug into the GIVN backbone. An exception to this was CWI, which did not have a VPN and thus needed to build up its GIVN capabilities from scratch; however, this has allowed CWI to offer national VPN service as well.

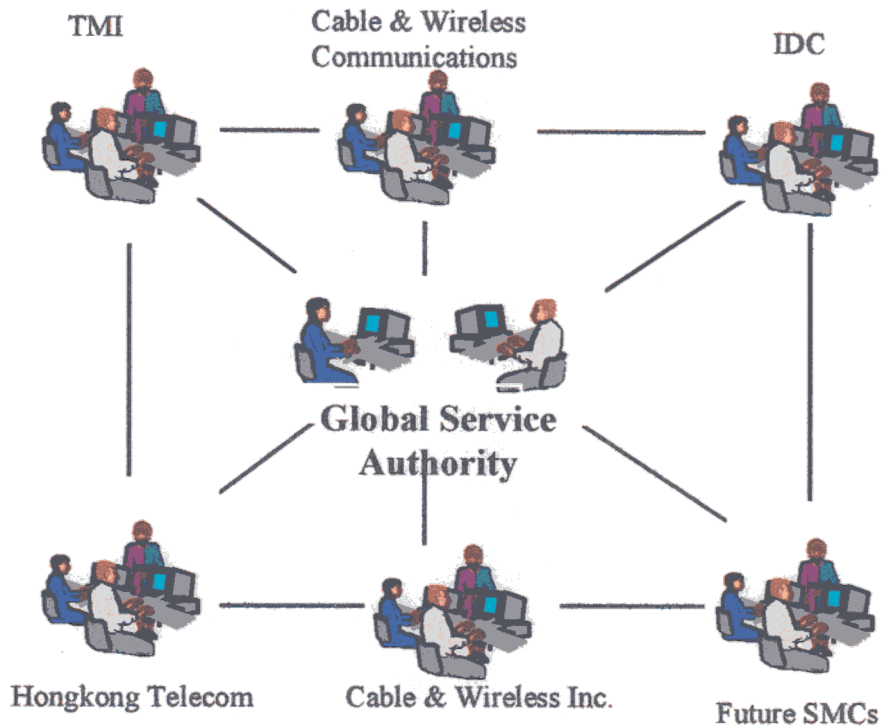
## Service Management

The **GIVN Service Description** was created for the Service Partners so that each would have a consistent understanding of the elements of GIVN. It formed the base document on which everything else was built. The need therefore was to ensure that the service was consistent across all Service Partners and that Service Partners all had the same understanding of the capability and used the same terminology. Service Partners were generally positive about this document. However, it did go through several iterations before final sign-off. In the early days, Debayo-Doherty and his colleagues placed emphasis on ensuring everyone had the same understanding of terminology, and that the service specified would meet customers needs and differentiate the offering in the marketplace.

Sign-off was fairly complex and lengthy as the Service Partners were not keen to sign up to anything they could not develop/deliver, and, as time came closer to launch, the level and depth of information in the Description increased a great deal. Also, as other documents were being developed in tandem, the service description had to remain consistent. Feedback from the Service Partners tended to be from their geographic perspective, so the CWBN GIVN Team needed to ensure that it adopt a true global view from one iteration to the next. The length of sign-off was not due to any differences of opinion on what should be developed, but more due to a desire for detail and accuracy. The service description formed the basis on which the service was developed and implemented and also led to the formation of other more detailed documentation on the individual elements GIVN, such as billing and service management.

The CWBN GIVN Team designed processes and systems for service management to include all key customer service functions: pre-sales inquiry, single supplier order, multiple supplier order, change management, inquiries, fault management, planned outage, and global consolidated management reports. A **Global Service Authority** was created within CWBN to help ensure the seamless implementation and maintenance of processes across all regional business units. The Global Service Authority performs the following functions: the provision of a 'global view' of the customer's configuration and dial plan; escalation; performance management; customer implementation of test co-ordination; dial plan management co-ordination; the integration of new Service Partners without affecting existing service excellence; global reporting; customer service level agreements storage; and, data back-up. Service management centers are located in every country of service and are seamlessly interconnected by web-based management tools.

Figure 4: Service Management Infrastructure



Service Partner reaction to the Global Service Authority tended to be mixed. Some viewed the centralization of customer service as a positive development to assuring consistent service levels worldwide. Others took a more pessimistic view. John Armley, former Director of Development at IDC commented:

We did not see value in GSA — a service center in the sky. It is based in London, speaking English, on English time. Fundamentally, what you want from a global product is that the processes within partners be transparent. Effectively, the processes won't be the same, even though they strive at the same goal. You need standard forms with standard information, but what takes place behind the scene is never the same. It is a nice ideal, but not presently possible.

### Global Billing Strategy and Interface

The CWBN GIVN Team developed processes and systems that would allow for consolidated global billing and reporting of the GIVN service. The processes are prerequisites of customers who require local invoicing and local reporting, local invoicing with global reporting and global invoicing with global reporting. GIVN offers a suite of billing management reports that summarize a customer's calls at the global level to provide information to help the customer make decisions and control costs. GIVN global reports and bills are based on information generated at the local level, which is centralized and consolidated. Each GIVN Service Partner operates a local billing system that collects data from the switches, rates calls and produces bills for GIVN calls originating from their network. To create global consolidated reports or bills, data is filtered from local billing systems using a global standard interface format and passed to a central consolidation engine. This converts the information into a standard global format for use by the global reporting and billing



engines. The global reporting engine produces global customer reports on a monthly basis and consolidates data to produce global bills in the client's choice of currency and medium.

GIVN's strategy for billing was developed to address the following objectives:

- to meet customer demand/requirements consistently across all Service Partners;
- to align with the offerings of the competition;
- to provide the customer "value-added" elements not available from the competition; and,
- to develop this in the most cost-effective manner, leveraging existing capabilities rather than re-creating the wheel

The concept of a global interface was accepted readily by all Service Partners. The development of the interface within each Service Partner function had to follow local processes, which differed from one Service Partner to the next. All Service Partners have or are developing the interface, however, due to conflicting local priorities, the pace and schedule of development are not consistent across partners. In most instances, development has proceeded smoothly, with minor issues, which were easily addressed by the local Service Partners/CWBN. Certain Service Partners needed to develop additional local processes in order to comply with GIVN requirements, due to the fragmented nature of legacy systems. CWI, in particular, had difficulties complying with the specified billing interfaces. Explained Sian Simon, GIVN Product Manager at CWI: "Early on, no one could get information regarding what CWBN wanted, so CWI went ahead and built what they saw fit. Then, CWBN requested something else, and people here did not want to follow up on it."

According to Jo Harris, Marketing Manager of GIVN, the billing interface utilized "was the only feasible option to satisfy the customer's global reporting/invoicing requirements in a timely and cost effective manner. One of the lessons learned in delivering this capability is where we had the opportunity to have face to face contact with the Service Partners, the development progressed much more smoothly and helped deliver a quality product with minimum issues at testing stage."

## Global Sales and Bid Process

GIVN is a complex service with a long sales cycle, demanding a considerable sales effort. For this reason, the CWBN GIVN Team developed a global bid process that would help focus precious financial and human resources on those bids the Service Partners were most likely to win. The Service Partners supported the initiative to standardize the sales and bid process and could see the benefit of having it in place. Comprehensive documentation and training seminars acted to improve communication between Service Partners and bolster the consistency and quality of proposals. However, some problems have arisen:

- Because certain lead account managers are reluctant to engage fully with virtual teams, a lack of interpersonal relationships among members of virtual bid teams has led to several costly misunderstandings.
- Account teams do not follow the process consistently, leading key service forms to be filled out incorrectly or not at all. This results in delay and frustration, as one Service Partner tries to follow a process that is ignored by another.
- Some account teams do not appreciate the need to work with other Service Partners and are accustomed to getting their way by 'shouting the loudest'; in an alliance of companies with different cultures and attitudes, this mode of 'interaction' frequently leads to frustration all-around.
- The process relies on a lead Service Partner, usually the one that has the best relationship with the customer. In some cases this has led to one Service Partner doing much of the work, even though they may not receive much of the revenue. Account managers find it hard to put in a lot of effort if they see little reward for their particular Service Partner.



- Some account teams feel insecure about the processes. There have been instances in which it would have made sense for sales staff to refer to the sales and bid manual to resolve minor issues, but instead they contacted CWBN GIVN Team directly, thus exacerbating the problem.
- The fit between local and global processes - the sales and bid was developed at the global level and work had to be done to make it fit with existing local processes. For example, although a process may be initiated in one Service Partner for a particular customer, local processes may mean that the customer is too small to be allocated an Account Manager in the supporting SP

While they hail the effort to standardize the sales and bid process, many of the Service Partners find the current process bureaucratic and difficult to follow. Simon explained CWI's view that the sales and bid process is "hugely cumbersome as far as we're concerned. There's an awful lot of paperwork, and sales people don't like paper work. Also, in the US customers anticipate much quicker response than in other countries. The present process requires too much time to complete." As a result, CWI has resolved to utilize the central process only when dealing with other Service Partners.

**Global Sales Training** was put together to ensure that all account teams in all Service Partners receive detailed training on GIVN. This helps ensure that the account teams have adequate knowledge to sell GIVN consistently around the world. The CWBN GIVN Team chose to accomplish this goal by holding semiannual 'train the trainer' sessions, in which delegates from the Service Partners are trained in the UK for a week and then are responsible for training individuals within their organizations upon returning home. Harris commented on the logic and success of the training process:

Due to the numbers and geographic dispersion of account teams, we felt this was the best way of managing it. It also enabled the additional local information to be included. The attitudes of the Service Partners were very different. All but one sent delegates to the course and, though all acknowledged the importance of training, the follow-through varied enormously. The course was very successful with all delegates leaving feeling that they were able to put the training in place in their own organization. One Service Partner in particular has done a very comprehensive training program, though there are still gaps to be filled. One Service Partner has still not given any formal training program, due to time constraints. This is causing problems, as their account teams do not understand the service/processes, which leads to each account manager being guided through GIVN on a case-by-case basis, which is very time-consuming internally for the Service Partner. Another service Partner has been slowed by organizational changes — the dedicated team of GIVN specialists who were trained has been disbanded, and only one of the three individuals who attended the course still has responsibility for training. Organizational changes mean that far more individuals need training and though this program is underway there is a long way to go.

Philippa O'Nions, GIVN Product Manager at CWC, offered that, "Training is very successful, but we haven't cracked all the problems. For example, how do you maintain on-going training without wasting peoples' time? How do you motivate people to utilize the resources/tools that are in place for them?"

The **Sales & Bid Manual** was formulated to ensure that all persons involved in GIVN at the Service Partners have uniform, detailed information on GIVN. The sales manual is formed of two parts: a service description, which can be given to the customer, and a company confidential section, which is for internal use only. By creating and managing the global sales manual, CWBN reduced the workload of the Service Partners product managers and reduced the opportunity for members of virtual sales team to duplicate their colleagues' efforts. All Service Partners bought into the concept of the sales manual and viewed it as essential for GIVN. CWBN wrote the majority of the manual but the Service Partners were required to write their own specific sections. The level of detail differed dramatically. Some Service Partners took longer to provide this input and certain Service Partners provided much more detail than others. Although the sales manual has been well received, not all Service Partners have raised its profile sufficiently

internally to ensure that the sales staff uses it. Also, one Service Partner still believes they will produce their own version using 'local' terminology, even though this will mean a duplication of effort and will detract from ensuring the customer always receives consistent information from any Service Partner.

### Finalizing the Composition of the Alliance

Once the ground rules for cooperation among the GIVN Service Partners were set, Michael Schueppert, Business Manager of GIVN at that time, authored a global business case that summarized conservative profit and loss estimates proffered by the regional business units. The global business case had each of the Service Partners making a profit on GIVN, within 3-5 years. C&W Group executives recognized that a flurry of competition emanating from global deregulation presented both opportunities and threats; C&W risked losing precious MNC customers unless it introduced a competitive global VPN service in the coming 18 months. All but one of the original Service Partners signed off on the new business case. The exception was Cable & Wireless Europe, jointly-owned by C&W and Veba of Germany, which rejected the plan as likely to be unprofitable.

Following the verdict on CWE, Debayo-Doherty and Schueppert scrambled to find a solution to the newly created "European Gap" in GIVN coverage. An intense search for a partner led the two to conclude that Telemedia Italia, a subsidiary of Telecom Italia, the world's fifth largest telecommunications operator, represented an ideal partner. TMI's recently completed European network not only would allow geographic coverage in key European cities, but could also be tailored to support the necessary interfaces (e.g. billing, pricing, etc.) with other GIVN Service Partners. The Italian company wished to increase usage of its network facilities, and thus responded favorably to CWBN's overture to form a tactical alliance on GIVN. As CWBN and TMI were negotiating the GIVN deal, the parent companies of both entities were engaged in protracted discussions with various third-party global operators about forging grand mergers/alliances. Consequently, the CWBN GIVN Team struggled with the challenge of relating corporate strategy with their business strategy. Schueppert explained:

C&W as a group has a clear strategy to globalize. As a product group, we sought to formulate a compatible business strategy that would allow us to create a profitable, global product. However, you can't solve a whole company's problems with one product; you just hope that the people at the top formulate a strategy that accounts for your product and allows it to fit more suitably into the company's objectives. How well you do at a strategic level affects your ability to fight on the tactical level. The tactical level is about the specifics of executing strategy.

In the telecom business, the grand strategic level keeps changing. While we were attempting to sign a deal with TMI to extend GIVN service into Continental Europe and thereby solve a tactical, capacity problem, C&W was simultaneously working on various strategies and deals that may have entirely altered the outcome of this deal. Despite this, Aki and I shared the opinion that initiating a tactical relationship on one product would, perhaps, help drive a C&W-TMI deal at a greater level. Unlike any of the 120 priests of strategy at corporate headquarters, we understood the value of TMI voice capabilities at a very intimate level.

During the summer of 1997, as CWBN and TMI carried out negotiations to hammer out a final agreement, matters seemed routine enough for Debayo-Doherty to take off on a two-week vacation in Egypt. While he was away from the office, disaster seemingly struck, when AT&T announced that a strategic relationship was to be consummated with Telecom Italia and that TMI would be merged with Unisource (part of WorldPartners). Debayo-Doherty returned from holiday to find a largely demoralized team and very anxious e-mails from executives requesting to know whether the CWBN-TMI deal was dead. CWBN's options were limited, as it would take another 20 months to implement a new network in

Europe, were the TMI to be scuttled. In order for the GIVN project to survive, Debayo-Doherty and Schueppert determined that they had to convince TMI to align with two global operators. Despite the unorthodox nature of such an arrangement, the CWBN GIVN Team succeeded to agree to terms with TMI. Debayo-Doherty explained:

The key to TMI proceeding with the development in parallel with their Unisource discussions was the great rapport built up between the CWBN GIVN Team and their partners at TMI. At the working level, the two teams simply decided they should continue to show the tactical benefits of the relationship until someone told us to stop. This working level affinity blossomed, giving both parent companies a working example of how a strategic relationship would be a good fit. This was a clear indication to me that no alliance would survive if the working level rapport did not exist.

Just nine months after its deal with TMI, Telecom Italia and C&W announced they had agreed to a far-reaching global partnership.

### Service Partners' Perspectives on GIVN

Most Phase I Service Partners viewed the development of GIVN as an impressive feat, but had concerns over the marketability and cost of the product. Asian Services Partners expressed dismay over GIVN's relatively weak presence in Asia Pacific. On the other hand, that GIVN had a strong presence in Europe and North America led some in Asia to question the value of paying for its further development. Commented John Bolton, Manager of International Switched Services for HKT:

GIVN was decided at high-level as good for Group. Development was done. But the members of alliance are now faced with the bill. I don't know if there was any discussion of how to split the bill. Effectively, it seems there was an open-ended budget, and the instructions were to do the project in the most cost-effective way possible...From my perspective, I'm not comfortable that I'm losing money. London argues that the product is good for the group, which makes sense, but I'm concerned that this is still loss-making.

The concern over selling GIVN outside of Europe and the USA was further stressed by Sally Fuller, Manager of Market Planning and Support at HKT: "GIVN's current stage is that it needs to outsource some of its geographic roll-out and concentrate on marketing and sales to get customers on board. We don't need a central product development house...we can go get a product off the shelf — easy stuff. Persuading someone to buy the product is the really hard part."

Selling the product in Europe has proven challenging as well. As Giuseppe Spinelli, Vice President of Network Development for TMI, commented, "Up to now, only small business is emerging from GIVN, so I cannot consider it a success. In terms of knowledge and experience, its great; but, in terms of profit, its small." Looking ahead, Spinelli posited that the biggest challenge facing GIVN is continuing to evolve its business proposition from that of offering cost-effective, high-quality services alone, to becoming the systems integrator and business consultant of choice of the customer. "Smoothly or not," Spinelli said, "we need to do this through our alliance. No one entity can afford offer such services on a worldwide basis."

John Armley, of IDC, reflected that GIVN took a standard product and sought a new way to package and sell it — and did so successfully. However, he cited misalignment in Service Partner interests as the cause of some discontent with the final product: "CWBN does a good job at putting together global propositions. The problem is that no one wishes to put any skin in the game. The reason, from our own perspective, is that propositions like GIVN are not so interesting to us. Waiting for others to catch up and getting billed for this time and effort [reference to CWI and CWE] is something that we don't like to do." Sian Simon of

CWI, took Armley's argument a step further, explaining that the GIVN business model is a good one, but one that could benefit from more centralization. According to Simon, "CWGM does not manage the core infrastructure and core features of GIVN. Centralizing the core functions, like billing and features on network, while leaving sales and other country-specific functions separate [would improve the GIVN business proposition.]. C&W is a cooperative, and a bit too democratic at that."

Philippa O'Nions of CWC also commented on the tension between local and global interests, saying that although CWGM has ultimate responsibility for management of the product, it is hindered by the local priorities of the Service Partners. According to O'Nions, the GIVN Service Partners must take action to align local and global interests, if GIVN is to prove commercially successful. To this extent, O'Nions suggested that local sales teams need to be incentivized for making global sales. "Local managers are not given global objectives in terms of how they are incentivized," O'Nions reflected. "The objectives are very parochial. The results of that are that we react globally, but we are not proactive in this market."

Employees of Optus, working on introducing GIVN service to Australia during Phase II, expressed concern over the viability of selling the product in their home market, where few MNCs are based, as well as the cost of development. Said Mary Werwick, Director of Planning and Product Development, "Inter-group development is seen here as old C&W intellectualizing. If global products are successful anywhere, we don't know about it. For global accounts, we have ten times as much competition as we do for Australian accounts." Oliver Stacey, Marketing Manager of Optus, noted, however, that the development of GIVN did not resemble that of other CWBN global products, which he viewed as a positive sign of things to come from London: "GIVN has been structured differently from other global products, with price being the key determinant for customer [and, thus, cheap product development on the part of CWBN]. The GIVN development effort has come down here with more qualified people that are able to drive the value of the proposition. They have been playing more of a consultative role, than a dictatorial one."

Allistair Grieves, Deputy Chief Executive of HKT and long involved in debate of how make better use of C&W global assets and improve the structure of CWBN, offered an optimistic view on the direction Sexton chose to take in reconfiguring the business unit:

The new set-up of CWBN as a company is logical. It improves transparency of its accounts (makes them less opaque than in the past) and brings in more discipline to the financial side. Hopefully, it will give them total global management accountability for a certain group of customers. It's a mission "difficult", not impossible. Much depends on how the competitive situation develops. Traditionally, too much time has been spent on intra-group value transfer issues and internal debate, instead of talking about customers. Tactical solutions are the only way to go...it's not ideal. But having said that, none of the big deal solutions seem to last more than a couple years. History is just littered with grand strategy deals gone bad.

### **Is GIVN a Success Worth Emulating?**

Dave Sexton considered the construction of GIVN to be a noteworthy achievement, in terms of pulling together an impressive array of both technical and human resources at only 70 percent of budgeted costs, but he remained concerned that the product would prove a financial drain on CWGM's bottom-line. He articulated this concern, explaining that no longer was it sufficient for a telecommunications product to achieve leadership in cost or differentiation, alone, to guarantee its profitability in the rough-and-tumble telecommunications market place of the '90s:

In order to survive within the global telecommunications environment, C&W must demonstrate that it can generate the lowest cost base internationally, while providing feature value to its customers. Fundamentally, customers don't care about GIVN or any other branded product. What they want are solutions that address all of their communications needs — voice, data, video or otherwise — for the lowest cost possible.

Within the larger context posited by Sexton, GIVN represented a piece of capability which, over time, would be enhanced to be more feature-rich. Given that customers recognized GIVN primarily as a low-cost proposition and that the telecommunications industry was in the midst of a trend of global deregulation and perpetual price-slashing, Sexton felt that GIVN would need to help CWGM protect its revenues and grow the business of other C&W Group entities in order to justify its cost.

As he finished reading Debayo-Doherty's and other internal reports on GIVN, Sexton found himself wondering whether, in an era of eroding margins, fast-changing technology, diverging group interests and tenuous alliances, the story of GIVN offered a paradigm for how best to develop and market products in a virtual business environment.

## **Glossary of Terms**

### **C&W**

Cable and Wireless plc. C&W is the abridged, unofficial title of the company.

### **CWBN/CWGM**

Cable & Wireless Business Networks/Global Markets. Terms used interchangeably. Part of the C&W Group set up to provide services for the needs of the multinational corporate customers. CWBN was split into a marketing unit (CWGM) and wholesale services unit (Global Network Organization) in late 1997.

### **GIVN**

Global Intelligent Virtual Network. An integrated switched voice and data service delivering the key features and flexibility of a private network, together with the reliability, capacity and cost efficiencies of the public switched network.

### **ISC**

International Switching Center.

### **Managed Telecommunications Services**

Generally used to refer to telecoms services that are operated and maintained by a PTO/provider on behalf of its customer. GIVN is an example of a managed voice service.

### **o.tel.o**

The telecommunications subsidiary of VEBA AG and RWE AG in Germany; future GIVN Service Partner.

### **PSTN**

Public Switched Telephone Network. The complete network of interconnections between telephone subscribers, operated for public use by one of the licensed PTOs.

### **PTO**

Public Telecommunications Operator. An organization licensed to operate a fixed-line or cellular public telecommunications network, and to sell telecommunications services to customers.

### **RBU**

Regional Business Unit. Term describing companies throughout the world with the C&W Group.

### **Service Partner**

Service Partner of GIVN. A GIVN SP can be another PTT, telco or company with licenses to provide GIVN services in a part of the world.

### **Signaling**

The passing of information and instructions from one point to another relevant to the setting up or supervision of a telephone call.

### **Tele2**

Second licensed operator to deliver PTT service in Sweden; a future GIVN Service Partner.

### **VPN**

Virtual Private Network. A voice and data communications service, which gives customers the simplicity and flexibility of the public switched network, combined with the value-added features of a private network.

Exhibit 1

# C&W Worldwide Operations



Exhibit 2 GIVN Feature Description

Core feature set	Non core feature set
<p>These features are offered by all GIVN Service Partners.</p> <p><b>Seven-digit customer global Dial Plan</b> — each site on your GIVN network is assigned a unique seven digit Dial Plan number (LLL-EEEE)</p> <p><b>Variable-length customer global Dial Plan</b> — each site on your GIVN network is assigned a unique Dial Plan number of a fixed length, between four and seven digits (e.g. six-digit Dial Plan for all sites in the format LL-EEEE).</p> <p><b>Virtual On-net (VON)</b> enables you to make calls to sites not on the GIVN using your GIVN Dial Plan. This enables you to integrate key suppliers or customers and make calls to them at Virtual On-net rates from GIVN sites.</p> <p><b>Forced On-net (FON)</b> ensures that if a user calls an on-net site using the PSTN number, it is translated to the appropriate on-net number, routed accordingly and charged for at the GIVN on-net rate.</p> <p><b>56/64 kbit/s switched data</b> — synchronous switched data, including Group 4 fax and video traffic, can be sent over your GIVN at 56/64 kbit/s. In order to support applications such as videoconferencing you can increase the bandwidth using inverse multiplexing.</p> <p><b>Call screening/barring</b> — you can place restrictions on the calls made over your GIVN, by allowing or blocking on-net and off-net calls to certain destinations.</p>	<p>The following features are offered by certain Service Partners — please check availability with your Account Manager.</p> <p><b>Mixed-length customer global Dial Plan</b> enables you to assign Dial Plan numbers of between four and ten digits to each site on your GIVN. For example, some sites may have five-digit Dial Plan numbers, and other sites eight-digit Dial Plan numbers.</p> <p><b>Time-of-day routing</b> — enables incoming GIVN calls destined for an on-net location to be routed to a specified alternative location, according to the time of day and/or day of the week.</p> <p><b>Direct Termination Overflow (DTO)</b> — enables incoming on-net calls to be delivered over an alternative access circuit, if the GIVN access circuit to the site is busy or has a failure.</p> <p><b>Calling Line Identity (CLI)</b> — provided the called party has a suitable handset or other equipment, CLI enables information about the caller to be displayed, e.g. the caller's phone number.</p>



Exhibit 3  
Summary Regulatory Country Analysis

COUNTRY	REGULATORY STATUS	ALLIANCES
<b>EUROPE</b>		
Denmark	Open; licenses not required	TeleDanmark = Concert, TeliaDanmark = Worldpartner ("WP")
France	No licenses issued	France Telecom = Global One 25% equity stake, Cegetel = Concert
Germany	4 international licenses; alternate infrastructures under construction	Deutsche Telecom = Global One 25% equity stake, Mannesmann = WP, Viag = Concert
Ireland	Voice monopoly. ISR allowed	Telecom Eirean (PTT) = WP
Italy	No licenses issued	Telecom Italia = WP (stake tbd), Albacom = Concert, Infostrada = Global One
Netherlands	Open; registration only	KPN (PTT) = 5% WP stake, Telfort = Concert
Norway	No licenses issued	Telenor = WP and Concert
Spain	1 other operator licenced	Telefonica = Concert
Sweden	Open; 3 full competitors	Telia = 5% WP stake, Telenordia = Concert
Switzerland	No licenses issued	Swisscom = 5% WP equity, Sunrise = Concert
UK	Fully open	BT = Concert, C&W = GIVN
<b>ASIA PACIFIC</b>		
Australia	4 international operators	Telstra = WP (stake being negotiated), Optus = planned GIVN
Hong Kong	International facilities monopoly to January 2000. ISR allowed Jan 1999. Call-back prevalent.	HKT = GIVN, WP, bilaterals, Hutchison = Concert. (As WP on-net is narrowly defined, for off net alliances partner with carriers licensed for IDD).
Indonesia	No licenses	PTT = WP and Concert
Japan	4 international operators, but restrictions on foreign ownership	KDD = WP - 24% Equity, ITJ = Concert, IDC = GIVN
Malaysia	Will liberalize in 1999	Telekom Malaysia = WP and Concert
New Zealand	No regulator; market forces prevail	Telecom NZ = WP, Clear = Concert, Sprint = Global One
Philippines	9 international licenses, government regulator	PLDT (PTT) = WP, Philcom = Concert
Singapore	Monopoly to 2000	Sing Tel = WP - 16% Equity and Concert
South Africa	No plans for liberalization	SA Telecom = Concert
South Korea	6 international licenses, government regulator	Korea Telecom = WP, DACOM = Global One, Samsung = Concert
<b>AMERICAS</b>		
Argentina	No licenses granted	None
Brazil	No licenses granted	Telebras = WP and Concert
Canada	Monopoly (except US traffic)	Teleglobe - gateway facilities only, Stentor = Concert, Unitel = WP
Chile	3 licenses granted	CTC = Concert
Mexico	13 licenses granted	Telmex = Global One, Alestra = WP, Avantel = Concert
Peru	No licenses granted	None
USA	Fully open	Sprint = Global One, MCI = Concert, AT&T = WP, CW = GIVN/C&W

(Source: CWGM)

## Exhibit 4 Global VPN Comparative Tables

## Geographic Availability

Country	GIVN	Concert VNS	Global One	World Partners VNS
Argentina	Planned Q4 1997/8	-	-	-
Australia	Optus coverage planned	Sydney	Melbourne, Sydney	Telstra coverage
Austria	planned Q3 1997/1998	Available	Vienna	Unisource coverage
Belgium	TMI coverage	Brussels	Antwerp, Brussels	Unisource coverage
Brazil	under investigation	Via Telebras	-	-
Bulgaria	-	-	-	-
Canada	Under investigation	via Stentor	via Sprint	AT&T Canada coverage
Chile	Planned Q4 1997/8	-	-	-
Czech Republic	under investigation	-	-	-
Denmark	planned Q4 1997/1998	-	Copenhagen	Unisource coverage
Finland	planned Q4 1997/98	-	Helsinki	Unisource coverage
France	TMI coverage	Paris - via Cegetel	via France Telecom	Unisource coverage
Germany	TMI coverage	Frankfurt - via Viag	Deutsche Telekom	Unisource coverage
Greece	under investigation	-	-	-
Hong Kong	Hong Kong Telecom coverage	Available - via BT Hong Kong	available	Hong Kong Telecom coverage
Hungary	planned Q3 1997/98	-	-	-
Indonesia	-	-	-	Via Indosat
Ireland, Republic of	C&W Comms coverage	Available	Dublin	Available
Israel	planned Q4 1997/98	-	-*	Available
Italy	TMI coverage	Via Albacom	Rome	Unisource coverage
Japan	IDC coverage	ITJ coverage	service available 2/98	KDD coverage
Luxembourg	planned Q3 1997/98	Available via BT Belgium	available	Unisource coverage
Malaysia	-	-	Available	-
Mexico	under investigation	Via Avantel	-	-
Netherlands	TMI coverage	Available via	Amsterdam,	PTT Telecom

		Telfort	Rotterdam	Netherlands coverage
New Zealand	-	Available via Clear Communications	Auckland	Telecom NZ coverage
Norway	planned Q4	-	via Sweden Oslo	TeleNor coverage
Philippines	-	-	-	Philippines LD coverage (now available)
Poland	under investigation	-	-	-
Portugal	planned Q3 1997/98	Via Portugal Telecom	Lisbon	-
Russia	Q4 1997/98	-	Ekaterinburg, Irk, Moscow, Novosibirsk, St Petersburg, Ufa	-
Singapore	under investigation	-	-	Singapore Telecom coverage
South Korea	under investigation	-	available via Korea Telecom and Dacom	Korea Telecom coverage
Spain	TMI coverage	BT Telecommunications coverage	Barcelona	available
Sweden	Tele 2 coverage planned	Via Telenordia	Stockholm	Telia coverage
Switzerland	TMI coverage	Via Sunrise	Geneva, Zurich	Swisscom coverage
Taiwan	-	-	-	Available
UK	C&W Comms coverage	BT coverage	London	AT&T UK coverage
Ukraine	-	-	-	-
USA	CWI coverage	MCI coverage	Sprint coverage	AT&T coverage

- - DT have obtained a licence to operate in Israel (Nov 96), but service not available yet

**Billing and management reporting**

	GIVN	Concert	Global One	WorldPartners
billing inquiries handled by Global SMC	✓	✓	✓	—
billing reports	✓	limited	✓	✓
network reports	planned	limited	✓	✓
service level reports	✓	limited	✓	✓

Features

Feature	GIVN	Concert	Global One	WorldPartners
<b>Main features</b>				
Call screening/barring	✓	✓	✓	✓
Calling line identity	partial	partial	✓	partial
Dial Plan, 7-digit	✓	✓	✓	✓
Dial Plan, variable length	✓	not in US	planned	✓
Dial Plan, mixed length	✓	✓	—	—
Direct termination-overflow	✓	✓	✓	✓
Forced on-net	✓	✓	✓	✓
Switched 56/64 kbit/s data	✓	commercially not viable	✓	New Zealand, Singapore, USA
Time-of-day routing	✓	✓	planned	✓
Virtual on-net	✓	✓	✓	✓
<b>Non-core features</b>				
Accounting codes	✓	✓	✓	✓
Authorization codes	✓	✓	planned	✓
Call center access	planned	✓	✓	planned

- depends on Service Partner

Customer support

	GIVN	Concert	Global One	WorldPartners
Global SMCs	✓	✓	✓	✓ (Global Work centers)
toll-free SMC access	✓	✓	✓	depends on local service provider
<b>In-country support</b>				
business or 24 hours	24 hours	business hours	24 hours	24 hours
multi-lingual support	✓	✓	✓	✓
in-country fault co-ordination	✓	✓	✓	✓
inquiry handling	✓	✓	✓	✓
Global Customer Service Managers	✓	✓	✓	✓ (Global Project Managers)

Exhibit 5 Virtual GIVN Team (Across Phase I and II Service Partners)

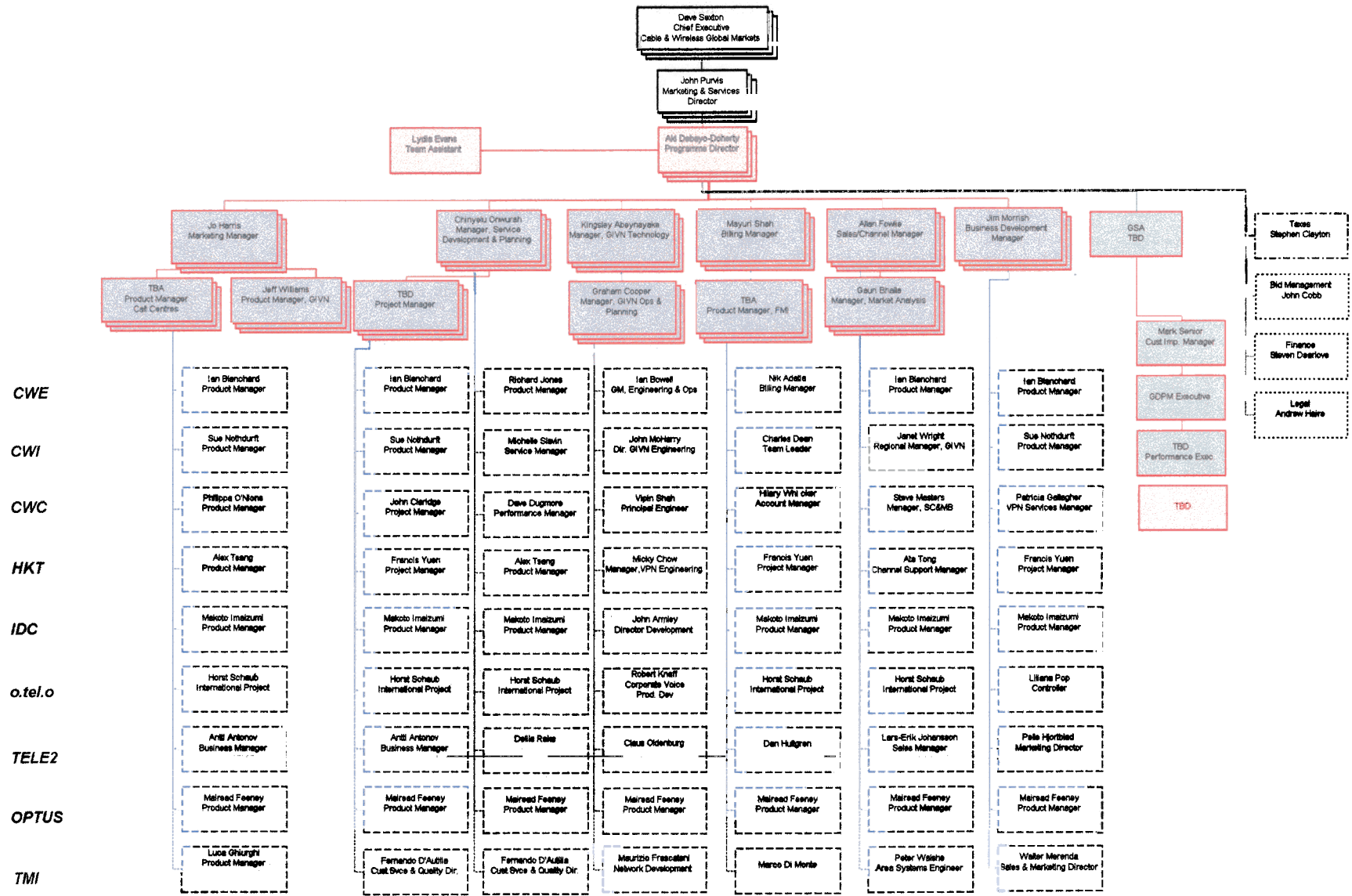


Exhibit 6

# CWGM Senior Management & GIVN Team

