

行政院及所屬各機關出國報告

(出國類別：實習)

赴日實習第三代行動通訊增值應用服務研習報告

服務機關：中華電信行動通信分公司

出國人職稱：助理管理師

姓名：孫儷娥

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實習「第三代行動通訊增值應用服務研習」

主辦機關:

中華電信行動通信分公司

聯絡人/電話:

陳月雪/23442808

出國人員:

孫儷娥 中華電信行動通信分公司 增值處 助理管理師

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內容摘要: 目前台灣為全球行動電話普及率最高的地區，各電信業者之語音費率在市場競爭下逐步調降，提供增值服務不僅可以刺激新需求，打開換機市場，鞏固既有客戶，進而創造更多營收。為強化本分公司行動上網增值服務之開發，此次赴日主要研習有關日本行動通訊市場之現狀、日本三大行動通訊業者對第三代行動通訊服務之經營概況、策略及服務提供之比較，以 NTT DoCoMo 為例，日本目前提供第三代行動通訊之服務與應用，及內容供應商營運模式及提供之增值服務應用介紹等，希望透過日本豐富經驗，探討增值服務應用發展方向，促使行動上網加速成長。

本文電子檔已上傳至出國報告資訊網

摘要

目前台灣為全球行動電話普及率最高的地區，各電信業者之語音費率在市場競爭下逐步調降，提供增值服務不僅可以刺激新需求，打開換機市場，鞏固既有客戶，進而創造更多營收。為強化本分公司行動上網增值服務之開發，此次赴日主要研習有關日本行動通訊市場之現狀、日本三大行動通訊業者對第三代行動通訊服務之經營概況、策略及服務提供之比較，以 NTT DoCoMo 為例，日本目前提供第三代行動通訊之服務與應用，及內容供應商營運模式及提供之增值服務應用介紹等，希望透過日本豐富經驗，探討增值服務應用發展方向，促使行動上網加速成長。

第三代行動通訊增值應用服務研習

目次

1. 實習目的
2. 日本行動通訊市場
3. 日本第三代行動通訊之市場概況
4. 第三代行動通訊之服務與應用
5. 內容供應商與增值服務應用
6. 心得與建議

目的

行動通訊市場在用戶數飽和及語音業務增長趨緩的情況下，如何提升用戶貢獻度(ARPU)，已成為各電信業者運營之重要課題，日本行動通訊市場語音與增值服務所佔比重將從 2001 年的 8 比 2，至 2005 年預估成長到 5 比 5，顯而易見，增值服務將成為未來業務主流，為電信業帶來了巨大的盈利空間，創造增值服務營收亦是本公司亟待努力的目標。

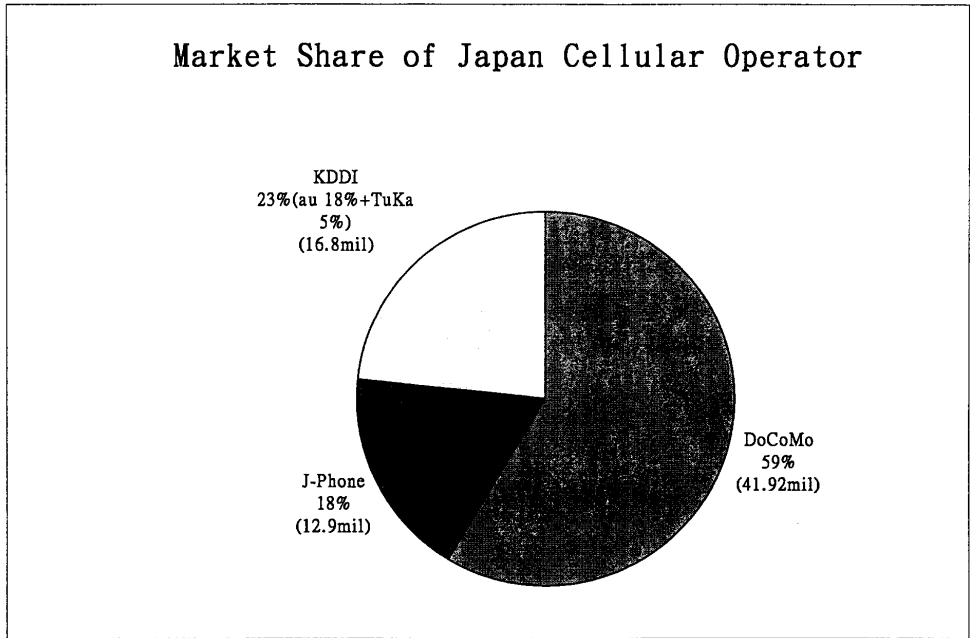
第三代行動通訊系統（即所謂的 3G）為無線通信與國際互聯網等多媒體通信結合的新一代行動通信系統，能夠處理圖像、音樂、視訊串流等多種媒體形式，提供包括網頁流覽、電話會議、電子商務等多種資訊服務。為了提供這些服務，第三代行動通訊系統無線網路必須能夠支援不同的資料傳輸速度，在室內、室外和行車的環境中，分別能支持至少 2MB/每秒、384KB/每秒以及 144KB/每秒的傳輸速度，無論從傳輸質量還是傳輸速率等方面，第三代行動通訊系統都具有很大的技術優勢，以無線上網、多媒體內容為導向的增值服務，將更為豐富。

全世界推行無線網路增值服務，最寶貴的成功經驗是來自日本。NTT DoCoMo 推出 i-mode 短短二年間，訂戶就已達到 2100 萬。在日

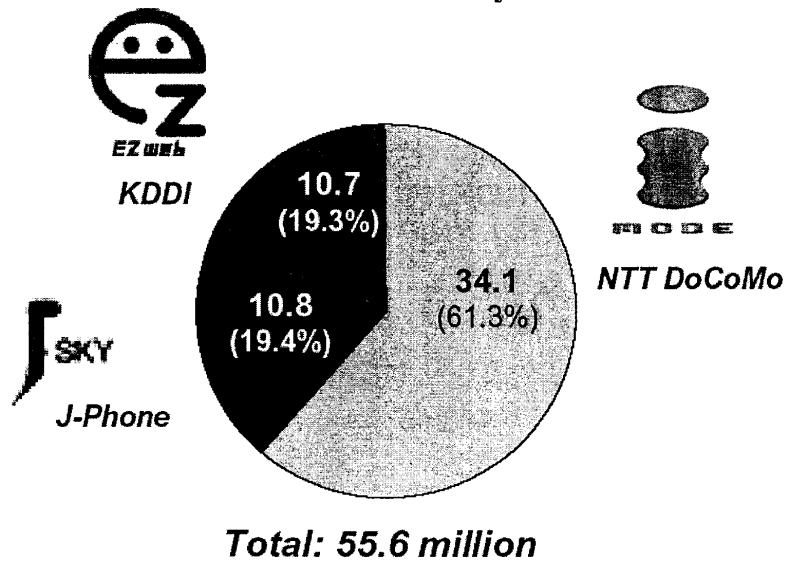
本，手機汰換期平均不到九個月，行動電話被定位成穿著打扮的配件之一，而手機的技術本身如何，大部份的使用者並不關心，他們只在意他們獲得什麼好玩的娛樂、電玩或傳訊服務。NTT DoCoMo 為使用者創造出一種嶄新的行動電話經驗。

挾成功經營 i-mode 的優勢，日本 NTT DoCoMo 已於 2001 年 10 月先行導入第三代行動通訊系統，推出較早版本的 WCDMA—第三代行動電話 FOMA 服務，另一行動業者 J-Phone 也以 3GPP 標準 WCDMA 網路，在 2002 年 12 月正式商業化，故日本推行第三代行動電話增值應用服務之經營經驗，其一舉一動或成敗均將成為我們準備推出 3G 服務的典範或借鏡。

日本行動通訊市場概況






Mobile Internet User by Services



- ◆ Market Penetration 56.2% at 72 million subscribers (excluding PHS: 5.7 million subscribers)
- ◆ Mobile internet user ratio in total subscribers is 78% (NTT DoCoMo 82%, KDDI 64%, J-Phone 84%)
- ◆ 82+% of terminals have data services (i-mode, EZ_WEB, J-SKY)
- ◆ ARPU trend is not clear for 3G. (KDDI ↑, DoCoMo↓)

一、行動上網服務之比較

Operator	NTT DoCoMo	KDDI	J-Phone
Terminals	<ul style="list-style-type: none"> ◆ Browsing in normal size handset ◆ color screen 		
Services	<ul style="list-style-type: none"> ◆ Operators run portals ◆ www access ◆ Entertainment & communication focus ◆ Target mass market ◆ Work with local content provider partners ◆ 10-30% increased ARPU 		
Operator Subs	42,026,000(PDC) 135,700(FOMA)	9,954,800(CDMA) 2,652,400(1X)	13,001,200(PDC)
Network	PDC-P/ W-CDMA	cdamOne/ PDC/ CDMA20001X	PDC/ PDC-P
Service Name	 i-mode	 EZweb	 J-Sky
Service Subs	34,883,000	11,150,400	11,079,300
Bearer	PDC Packet	CDMA Packet	PDC Circuit Switch
Speed	9.6 kbps	14.4kbps	9.6kbps

Operator	NTT DoCoMo	KDDI	J-Phone
Launch	Feb 99	Apr 99/Jan 00	Nov 98/Dec 99
Browser	Compact NetFront	EZ Browser	Original Browser
Markup Language	C-HTML	HDML	MML
Image	GIF	BMP,PNG	PNG,JPEG
Subscription	300 yen/month	200 yen/month	No monthly charge
Charge	0.3yen/packet	0.27yen/packet	2yen/req.or rep
Official sites	3200	900	1230
Still picture mail	I-shot, FOMA	e-mail	Sha-mail
Movie mail	-	-	Movie Sha-mail
Longer mail	i-mode mail	e-mail	Super mail
TV Phone	FOMA	-	-
Browsing services	i-mode	EZweb	J-SkyWeb
Java services	I-Appli	ezplus	Java Appli
Positioning-base d services	I-Area (Cell-based pull-type)	EZ@Navi (Cell-based pull-type) eznavigation (GPS-based)	J-Skystation (Cell-based push type) J-Navi (Cell-based pull-type)
Multimedia contents distribution	M-Stage (Circuit switch based) I-Motion (packet based)	Sound Market (Circuit switch based) Ezmovie (packet based)	-
Payment services	-	Paycounter	Sky Check
Mobile virtual shopping mall	-	Ez-Shopping Parade	J-Department
Payment at vending machine	C-mode	-	-

二、服務內容之比較

NTT DoCoMo

<i-mode Menu>

- ◆Appli menu
- ◆Weather/ News/ Information
- ◆Mobile Banking
- ◆Securities/ Credit Card/ Insurance
- ◆Transportation/ Map/ Travel
- ◆Shopping
- ◆Grummet/ Life information
- ◆Ring tones/ Karaok
- ◆Wallpapers/ i-Appli Wallpapers
- ◆Game
- ◆Fortune Telling
- ◆Sports/ Hobby
- ◆Music/ TV/ Radio
- ◆Magazines/ Entertainment
- ◆Town information/ Civil Services
- ◆Dictionary/ Convenient Tools
- ◆Mail
- ◆i-AOL Menu
- ◆i-PlayStation
- ◆i-Navi Link Site
- ◆Mobile Phone Manufacture

Partner site : 3,290

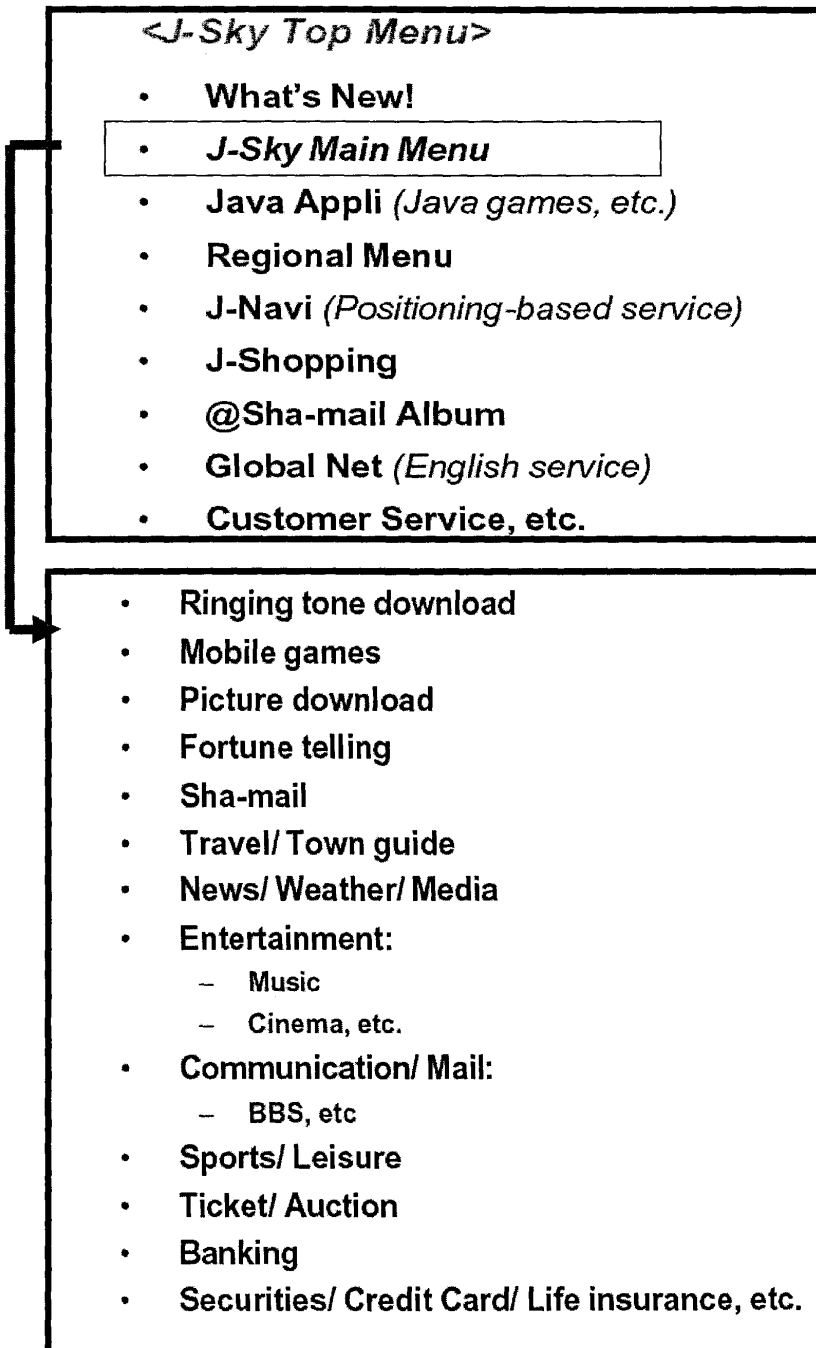
i-Appli : 444

Voluntary site : 59,869

(Oct. 2002, NTT DoCoMo IR)

<EZweb –EZ internet Menu>

- **EZ@Navi** (*Positioning-based service*)
- **ezplus** (*Java-based services*)
- **ezmovie** (*Movie distribution service*)
- **Mail**
- **News/ Weather**
- **Ringing tone download/ Karaoke**
- **Picture download**
- **Game/ Fortune telling**
- **Entertainment**
- **TV/ Media**
- **Sports**
- **Map/ Travel**
- **Restaurant/ Town guide**
- **Shopping**
- **Banking/ Money**
- **Life**
- **Communication**
- **Global site** (*WAP sites in the world*)
- **eznavigation** (*GPS based service*) , etc.



日本第三代行動通訊之市場概況

一、各業者之經營現況

NTT DoCoMo - FOMA

- ◆ Slow uptake due to coverage, battery life and roaming with PDC
- ◆ Pop. coverage is now 69%, 93% in Kanto area (Tokyo)
- ◆ Standby battery life is 125hrs in 3G FOMA (vs 55hrs)
- ◆ March 2003 target was to reach 1.3million 3G FOMA subscribers. New target is 400,000.
- ◆ Main reasons cited for low take-up are “attributed to its limited call area, short battery life and the fact that the 3G phone cost twice as much as the 2G version”
- ◆ Current subscribers = 135,700 subs (end Sept 02)

KDDI/au

- ◆ 500,000 subscribers a month. (-127k from PDC, -260k from cdma2000)

- ◆ All new subscribers are on CDMA 1X, no more subscribers onto PDC & cdma2000.
- ◆ Aggressive pricing to move subscribers from existing PDC & cdma2000 networks.
- ◆ March 2003 target is to reach 7 million CDMA 1X subs.
- ◆ Current subscribers = 2.6 mil subs (end Sept 02)

J-Phone

- ◆ 1st December target launch

二、各業者之經營策略

NTT DoCoMo - High cost of infrastructure and handsets
(developed specifically for DoCoMo)

Original strategy of pushing for a mass exodus from 2G to 3G by luring customers with videophones and other novelty services. DoCoMo now plans to develop 3G phones compatible with 2G models and phones. 3G is the new service, and different from 2G:

- ◆ Different target segment - 2G is for consumers and 3G is for business users.
- ◆ Different services - 2G is Browsing type & Downloading type service, 3G is Business application.

KDDI/au - CDMA 1X is an evolution step similar to GPRS/EDGE, however the real test is when CDMA 1XEV-DO is available.

Aggressively migrate existing PDC & cdmaOne subscribers to CDMA 1X before DoCoMo re-aligns & J-Phone launches. Success to date can be attributed to the use of the 2G network, enabling users to make ordinary cell phone calls even outside the special 3G calling area & aggressive handset subsidies. 3G is the extension of 2G service:

- ◆ Basically same set of service, such as Java application, GPS-based service, etc.
- ◆ Adding Camera function service.
- ◆ High speed network for easier to use.

J-Phone - Global standards

Implement rapid rollout of 3G for 95% pop coverage by end of 2003, based mainly on low cost Outdoor Base Stations.

三、各業者提供服務

NTT DoCoMo

i-mode:

- ◆ Up to 384kbps downlink high speed access
- ◆ Possible to attach still picture and music to i-mode mail
- ◆ Supports mail size up to 5,000 full Japanese characters
- ◆ Can use i-Appli contents
- ◆ Video clipping service on i-motion

M-Stage Service:

- ◆ 64kbps data speed access
- ◆ visual and music distribution service for Personal Handyphone System (PHS) users.

Multiple accesses:

- ◆ Can send data over the packet network while speaking on the phone

KDDI

ezmovie

- ◆ Movie contents distribution service

eznavigation

- ◆ GPS-based positioning service

ezplus

- ◆ Becomes more attractive being integrated with Java service

J-Phone

Basic services:

- ◆ Voice service
- ◆ 64kbps data communication service with PC with J-SA001

Optional service:

- ◆ Answering Service, Call Forward, Number Block(rejecting calls from specific numbers)

Other service:

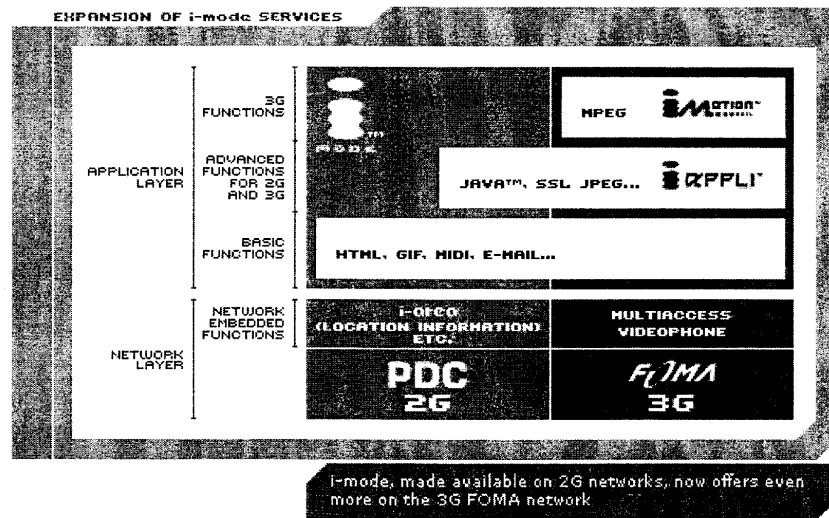
- ◆ International roaming service in GSM area - This will be realized by putting an USIM card of a J-Phone 3G terminal into a GSM terminal.

NO J-Sky service or NO video phone service if offered:

- ◆ J-SA001 users can take pictures with their built-in mobile cameras, but they can not send them to others as Sha-mail.

第三代行動通訊之服務與應用

NTT-DoCoMo 於 2001 年 10 月推出第 3 代行動電話 FOMA 服務，11 月接著推出「i-motion」影像傳送服務，並搭配銷售第二代手機 FOMA N2002，成為大眾矚目 3G 服務焦點，因此，NTT-DoCoMo 亦視此服務為促進 FOMA 大幅成長之關鍵，各家行動電話業者亦積極投入推展。



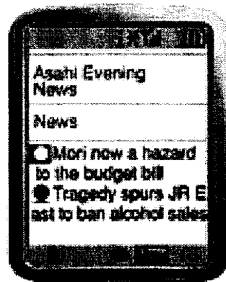
FOMA 提供 384Kbps 最大速度支援各類服務，瞬間 2 秒即下載完畢 100Kbyte 的檔案，影像的品質也能達一定水準，可視為 i-mode 的加強功能，使用者可享受更快速更多樣的服務：

一、i-mode menu site



FOMA's advanced technology has greatly extended the range of handy services and online entertainment on sites offered as i-mode menu sites. Account balances, money transfers and other mobile banking services, airline ticket reservations, restaurant guides and much, much more are always at your fingertips, just a few simple key operations away.

Asahi / Nikkan Sports



The Asahi Shimbun/Nikkan Sports News

This speedy news service provided jointly by The Asahi Shimbun and Nikkan Sports News provides the latest news whenever it happens, 24-hours a day.

i-mode information charge:
¥100/month

FORTUNE I

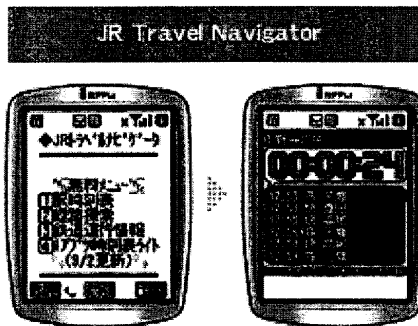


By using horoscopes and authentic tarot cards, we will tell you about your love life and the future in detail.

i-mode information charge:
¥170/month
TELSYS NETWORK CO.,
LTD.

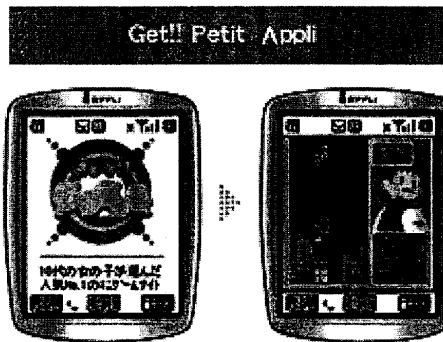
二、i-appli 

FOMA offers you enhanced i-appli content that you can download to your terminal. The growing number of i-appli applications includes entertaining video games, handy maps, automatically updated stock quotes and weather reports, and much more.



Search system helps you find the best transfer routes for train lines across Japan by using the most up-to-date train schedules announced each month.
i-mode information charge: Free (¥100/month for some content)

East Japan Marketing & Communications, Inc.



Find the hit Mini Tetris 2, Klondike and lots of other cute petit appli here.

i-mode information charge: ¥100/month

G-mode Co., Ltd.

三、i-motion 

i-motion is a video-clip distribution service available through FOMA, NTT DoCoMo's third generation (3G) mobile network.

i-motion adds to the existing range of enhanced i-mode offerings, allowing users to enjoy dynamic video content that expresses more than words ever could.

i-motion 使用 FOMA 封包通訊，最大傳送速度為 384Kbps，影像格式為 ASF 格式，以 MPEG-4 壓縮影像，聲音壓縮方式為 AMR 方式以支援立體音響。其內容規格如下表：

	Encoding formats	MPEG4 simple Profile Level 0 and MPEG4 simple Profile Level 1 with 3GPP restriction
Video Processing	Screen size	subQCIF (128 x 96 dots)
	Frame rate	15fps maximum
	Bit rate	Approximately 40 Bps
Audio Processing	Encoding formats	AMR
	Bit rate	12.2Kbps, 6.7Kbps
	Sampling rate	8KHz
Multiplex file formats	File format	ASF*
File size		100 Kbyte maximum (After multiplexing)

i-motion 提供服務類型

NTT-DoCoMo 區分傳輸內容為下列三種類型，讓內容提供業者有更大的發揮空間，凡是能以單純音樂或靜止畫面表達時，就無需傳輸動畫，想要傳達更豐富的內容時，亦能使用更具吸引效果的影像方式。

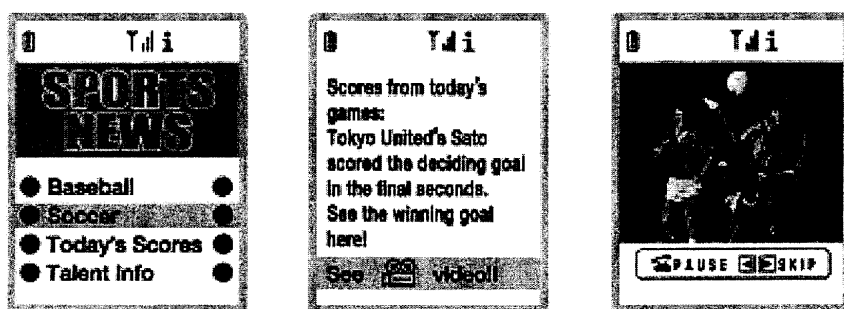
服務類型	服務內容	內容播放長度
影像 + 聲音	體育精采畫面、宣傳廣告短片、新聞影像等	approximately 40 seconds
靜態畫面 + 聲音	經典電影畫面、加入音檔之圖像	maximum length of about 30 seconds
聲音 / 音樂	樂曲、音樂試聽推廣	maximum length of about 100 seconds

如果使用具有像機功能之手機，亦可將拍攝之影像以 i-mode mail 寄出。

i-motion 適用機型

FOMA N2051, FOMA F2051, FOMA T2101V, FOMA SH2101V, FOMA P2002, FOMA N2002 and FOMA D2101V.

i-motion 服務內容範例



Access audio and video content through high-speed packet transmissions with reception rates of up to 384Kbps.



News/TV

Yomiuri-Hochi-Giants

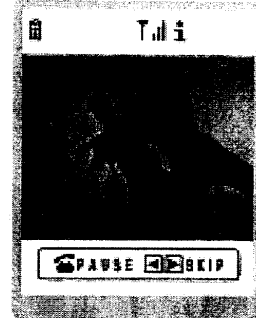
Video news and sports
on demand



Music /Moview

*Hollywood Channel**

The latest hit music and
new release movies



Commercials

*i-Dinos*** Viewing

products through video
images for online
shopping movies

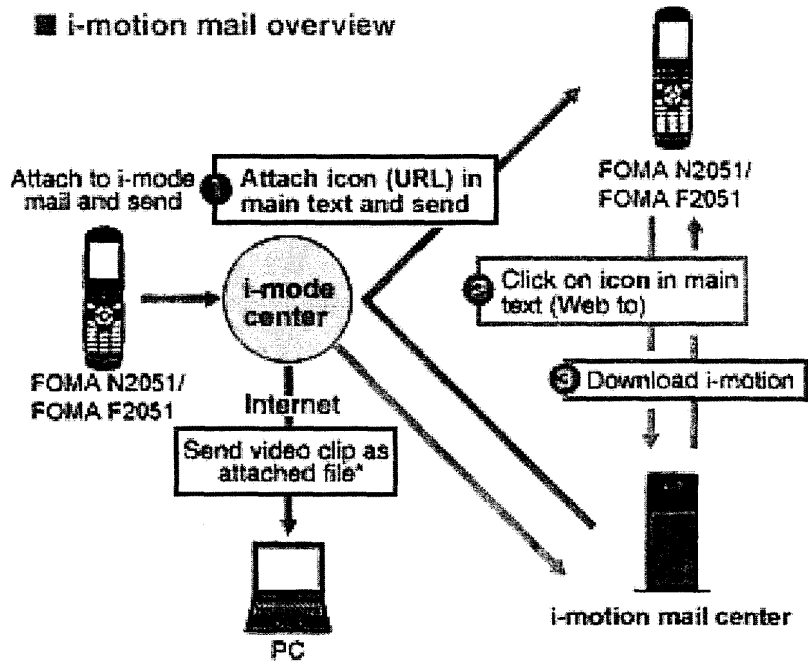
四、i-motion mail



Video clips e-mail via i-motion mail

Attach video clips you take and send them by mail with FOMA N2051 and FOMA F2051. Video clips you attach and send can be up to 100 KB (approx. 15 sec.*) Show the atmosphere of a place with smoothly moving video clips in real time — something words and mail with still photos can't do.

■ i-motion mail overview



Exchange video clip images you took by mail. The max. data volume you can send is 100 KB. The server can hold up to 15 video clips for seven days. Attach video clips and mail them to a PC*

*Installation of compatible replay software is required to play video clip mail on PCs etc.

i-motion mail has a frame rate of up to 15 frames per second.

DoCoMo video clip e-mail via i-motion mail max. 15 frames/sec.*



Frame rate per second

Video clips look good and play smoothly.

Actual images may differ from those shown.

Frame rate for the video clip e-mail of other companies*

	max. 7 to 8 frames/sec.
Company B	max. 3 to 4 frames/sec.

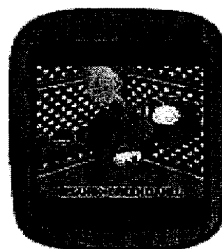
*The number of frames may vary depending on the subject and shooting conditions.

內容供應商與服務應用

一、BANDAI NETWORK



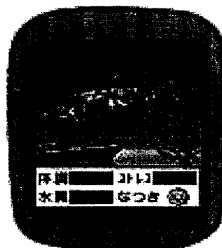
萬代網路公司的行動資訊服務是由網路事業部與網路內容事業共同組成的行動網路內容事業。其最受歡迎的網站內容服務是「隨取圖」、彩色卡通圖案等下載服務，另有各種娛樂性內容，例如：可傳輸人氣偶像的郵件或圖片、插圖，還可下載電視節目表、音樂會等各項活動資訊，音聲訊息、熱門音樂的來電鈴聲，歌手偶像的獨立網站，利用郵件傳輸的虛擬愛情遊戲及可選擇各種類型桿弟的高爾夫球遊戲等。



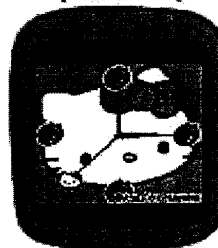
3D Del Characters



Suki Suki Pair Character!
[Tete-a-Tete]



Aqua Mode

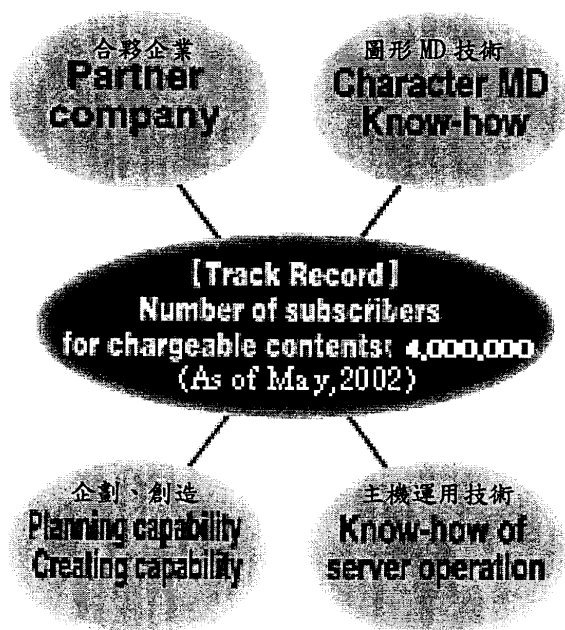


Karakuri Charappé!

萬代網路公司擁有系統開發、內容製作及主機運用等豐富經驗，目前正積極著手於 Java、3D 動畫等服務，提供給日本主要行動電話業者，客群鎖定在 20-30 歲男女行動電話用戶，至 2002 年 5 月止已達 400 萬用戶數，每個月平均一人只要花費一百至三百日圓的月費，即可確保四億至一千億日圓的營收。

其成功的經營策略除了將自家公司資源放在最尖端的網路技術上，快速反應新技術發展新的服務內容，產品明確的定位於行動電話特性及使用者打發時間的需求，利用聯盟方式強化內容製作能力。其主要經營構思如下：

運用優點展開戰略



- ◆ Record of performance

As of May. 2002, the number of subscribers for chargeable contents provided by Bandai Networks Co., Ltd. amounted to about 4 million. This massive number itself contributes to bringing up the possibilities of following businesses.

- ◆ Know-how of server operation

The mobile contents charge only 100 to 300 yen monthly as an information charge, but we should surely make profit after deviding enough profit to partnerships. What realizes this problem is the knowhow and technologies of how to operate server systems to withstand a heavy load at low cost.

- ◆ Know-how of character MD

Character merchandizing is one of our biggest fortes. Our know-how cultivated through toy business of how to obtain popular characters' copyright to commercialize and provide such characters to be accepted by people, will be also utilized in the net.

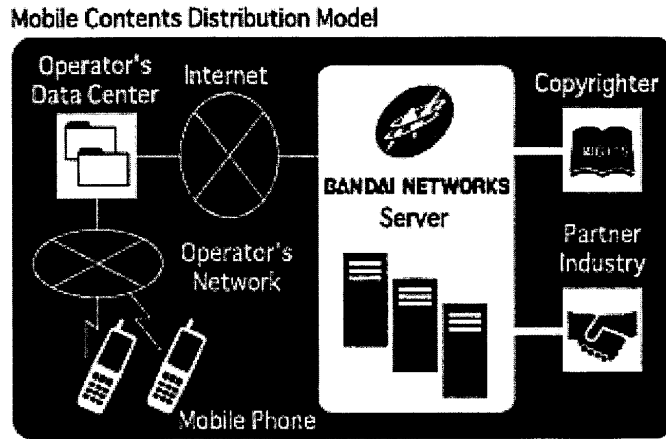
- ◆ Planning and Creating capability

We love making ourselves and others fun. Otherwise we cannot plan business from the viewpoint of consumers. With such belief, we are making business plans actively and noisily

- ◆ Cooperation with partner company

We are aiming at proper sharing of profit propotional to investments and risk partner beared. Many companies who agreed on our ideas are now our partners, and we are creating larger power by using each company's advantages in planning, technology and management.

行動資訊內容合作架構



萬代網路公司熱門服務內容：



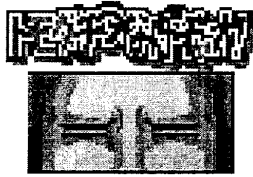
200Yen
per Character

Standby screen images now come in 3D!!
Download them to your cell phone, and watch your favorite characters come to life. You won't be able to take your eyes off their entertaining new animations.



Mobile Suit Gundam:
Mobile Operation J
300Yen

A game site that makes full use of Java[®]'s large data capacities, "Mobile Suit Gundam: Mobile Operation J" includes action games, shooting games, and simulation games based on the One-Year War from the original TV series plotline.



**Tomodachi
Tsunagechao!
200Yen**

Based on preferences revealed through interactions with the user, the character "Shige Shige Shigeo" acts as an agent to find compatible new friends among other registered users. A new style communication content service.



**Suki Suki Pair
Character! [Tete-a-Tete]
200Yen**

The character "Shige Shige Shigeo" acts as an intermediary between users to facilitate communication in this "agent-driven" content service. Based on information gained from the user, "Shigeo" interacts with "Shigeo" owned by other people. The interaction between the two agents makes it easier for users to broach awkward or embarrassing topics, creating a whole new style of communication.



**Aquafish
300Yen**

It's easy to raise tropical fish when you've got a cell phone! With "Aquafish", you can select from a wide variety of fish, raise them in your virtual tank, and watch them as they swim around on your cell phone screen. Test your knowledge in the Tropical Fish Quiz, and check your ranking on the Aqua List.

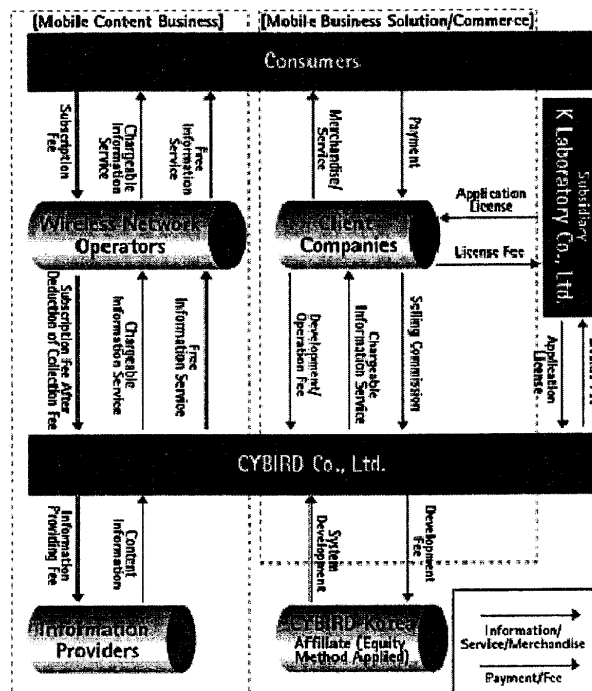


**Character Mail Service
300Yen**

With this service, you can decorate your e-mail with popular characters and send it to any i-mode member. Also, e-mail and illustrations can be sent to you from your favourite character. Presently, Disney and Sanrio (Hello Kitty, etc.) characters are available.

二、CYBIRD 網路公司

CYBIRD Co., Ltd., 為日本行動電話服務 content aggregator，目前擁有約八十種網站內容服務的企劃與開發，網站內容主要集中於娛樂與通信類，包含待機圖案、桌步下載、衝浪及釣魚資訊、寵物愛好者社群、星座、地圖及上班女郎社群等服務內容。CYBIRD 公司擁有與行動電話公司的溝通管道及基礎環境設備，結合從事網站內容之公司，組成合作夥伴，以支援或代理執行系統建構、網站內容製作或系統運用作業，除此之外，亦與具有創意或商務模式的個人或企業合作，其內容服務事業漸已拓展至北美與歐洲等無線網路，朝全球化方向發展中。



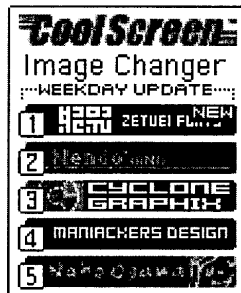
CYBIRD 網路公司熱門服務內容：

**CoolSound
(Ringing Tone)**



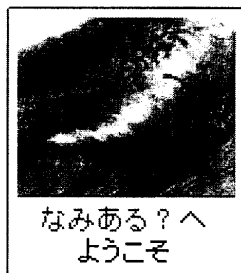
Cool Sound offers a diverse high quality selection of "core" music, such as Techno, HipHop, Mellow Core, Mixture, R&B/Hip Hop and famous Soul & Funk etc. for calling melodies. Not only a premier downloading service for brand-new tunes of famous artists, but also special features, such as a tie-up promotion with music events and label specials are available. You can download the original melodies arranged exclusively for Cool Sound users.

**Cool Screen
(Wall Paper Image)**



Provides "cool" wallpaper images for mobile phone display. You can select ones from the genre of "Pictogram", "Oriental", "Typography" and others. Thanks to "i-Appli", you can save on the packet charge. In addition, you can attach your favorite images to your e-mail. Arranged exclusively for Cool Sound users.

**namiaru?
(Surf Information)**



"Namiaru?" provides real time surf information not just for Japan but for the world! It is also overflowing with an assortment of useful information, including official professional tour results from the Japan Pro Surfing Association, a who's who of professional surfers, surf-shop information with discount coupons attached, and the latest surfing news. If you want to customize your mobile phone, you can download cool surfing brand logos and photos by famous surf photographers to use as your wait-mode screen image, or even get surf music from the '80s and '90s as ring-tone melodies! Don't miss it



Neko no Jikan
(Information & Community)

Information and communication site for cat lovers. It covers Q&A, health check-up, fortune telling, IQ test, games, message board and poems on cats.

Appli Machiuke Tokeiya-san
(Waiting Clock)



This attractive service enables you to use your mobile phone as a multi-function-clock. More than 300 hundreds kinds of cool analog and digital watches are available for your own display. All the watches have "Calendar Function", "Weather Forecast Function", and "TV Program Guide". This "i-Appli" content service also offers you other features such as "Original Watch Assembling Function", "Gift Delivery Function" and "Special Present Event".

Kagami Ryuji no Shinrisenseijutsu
(Astrology)



Kagami Ryuji produces this authentic astrology service. You can send greeting mails with future telling, and can receive personal consulting from Ryuji Kagami himself, a unique feature of this site. Furthermore, in the i-Appli version, your handset turns to an amulet watch. It also provides "Lucky Calendar".

Idoru to Koisiyo
(Game)

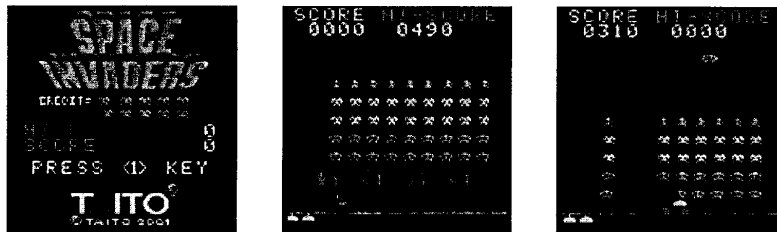


This is a love story experience drama for mobile phones, starring five popular idols including Otoha. Users can experience personal relationships with the celebrities who could only be reached through magazine photos and TV screens before. As you have dates with them and become closer, you would be able to download wait-mode screens or ringing tone voices. With ezmovie-compatible mobile phones, moving image may also be viewed.

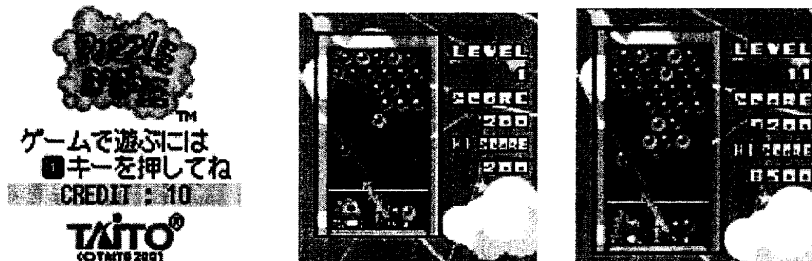
三、Taito Corporation

Taito 公司夾其在遊樂場電腦遊戲之技術背景與經驗，於行動網路中發展以娛樂性為主的服務內容，包括射擊遊戲、拼圖、具有十六至三十二和絃樂的影像卡拉 OK、3D 動畫桌布下載與待機圖案，其熱門服務有：

"Space Invaders" is a shooting game that created a boom all over the world. The game is a faithful recreation.



An action puzzle game, Puzzle Bobble. The game, aimed at young professionals, is recreated in all it's stylistic glory.

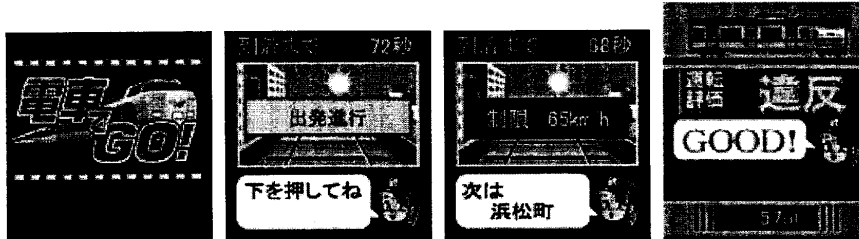


The classic Crazy Balloon finally reemerges!



The train simulator finally arrives on mobile phone!

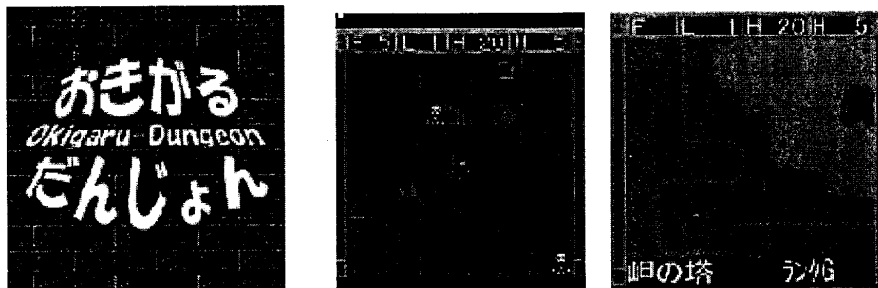
I will run through tracks all over the country, wherever the mood takes you, the driver! You will have to adhere to speed limits, drive safely and stop correctly at stations. Can you drive a train with a driver's viewpoint and can stop to within a time limit at a station safely? Each time you play you pay a credit, but as you download the game you are given 20 credits to begin with.



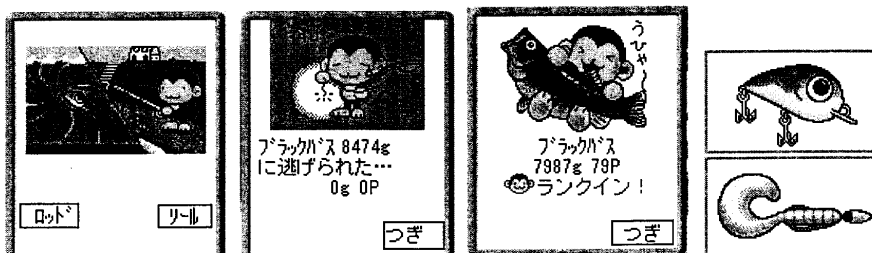
Dungeon type RPG (role playing game) that can be enjoyed any number of times easily.



Although the purpose is beating evil spirits, various trials besides it are waiting.


You who became one of fighters leave in order to defeat a dragon, others creatures and to regain peace.










Turi Zuki Saburou. Real bass fishing action game. You can catch fish by operation the lure and the reel well in timing.



SITE	GAME	SERVICE CARYER	Price
Game Park If the visitor registers with a GamePark, "Space invader", "Puzzle bobble", a "Crazy balloon" etc, can be played freely.	Space invader		\300/month(excl.tax)
	Puzzle bobble		
	Crazy Balloon		
TAITO Retro Expo If the visitor registers with a TAITO-Retro Expo, "Space invader", "Puzzle bobble"etc, can be played freely.	Space invader		\300/month(excl.tax)
	Puzzle bobble		

Gameselection If the visitor registers with a Gameselection, "Space invader", "Puzzle bobble"etc, can be played freely.	Space invader		\200/month(excl.tax)
	Puzzle bobble		

Train simulator	Train simulator	  	\200/download(excl.tax) •Credit system
Dungeon R.P.G	Dungeon R.P.G		\200/month(excl.tax)
Battle Gear	Battle Gear		\300/month(excl.tax)
Beat Groovers	Beat Groovers		\200/month(excl.tax)
Fishing Saburo	Fishing Saburo	 	\200/month(excl.tax)

心得與建議

從日本的行動電話增值服務發展歷程來看，豐富應用是一個漸次的過程。以 KDDI 為例，雖然較 NTT DoCoMo 晚了五個月推出 3G 服務，但因其提供 CDMA 和 cdma2000 相容手機，用戶得以平滑進化至 3G，且行銷時只談服務不提科技，相較於 NTT DoCoMo 的 3G FOMA 推出高價手機、低壽命電池與覆蓋率小等缺點，更受客戶青睞，於 2002 年 8 月底 KDDI 用戶數已佔日本 3G 市場 94%。KDDI 強調的是進化 (evolution)，用戶可於 2G 與 3G 間切換選擇最佳服務，NTT DoCoMo 提供的是革命 (revolution)，用戶選擇 3G 必須犧牲 2G，一旦週邊服務配套不佳，或未推出足以吸引用戶之服務應用，反形成升級之障礙。

目前日本提供的 3G 業務主要包括多媒體簡訊 MMS、簡訊、無線網路存取訊息服務、VPN 業務、WEB 會議業務、行動 Portal 及個人化業務、定址化業務、郵件服務、多媒體串流、音樂下載等，而這其中大部分應用都可以透過 2.5G 網路來實現，以 NTT DoCoMo 而言，大約有 6 萬多個內容網站支援 i-mode 服務，這樣形成的一個產業鏈可以實現娛樂、生活等多種資料服務，在日本已經相當深入人心，正是因為 i-mode 太過強大，所以 3G 對日本手機用戶，尤其是 i-mode 用戶來說，其資料類型的業務吸引力顯然要大打折扣。而當

i-mode 服務剛推出時，市場反應也是一片冷淡，所以 3G 業務的普及也不例外。

由此可見，開發 3G 服務也不可能一蹴可幾，而必須在實踐中不斷摸索，逐漸開發出能夠吸引用戶的「殺手級」應用，其成功繫於平滑過渡、應用內容、終端設備，行動增值服務將從基本的通訊服務，結合各式行動終端設備，找出新應用發展方向，強化數位內容提供、開發企業客戶之應用服務等，將成為後續獲利與否的主要原因。