

行政院及所屬各機關出國報告

(出國類別：其他)

參加 2001 年太平洋電信協會年會會議出國報告

服務機關：中華電信研究所

出國人 職 稱：所長

姓 名：梁隆星

出國地點：美國夏威夷

出國期間：90 年 01 月 14 日至 90 年 01 月 18 日

報告日期：90 年 02 月 23 日

H6/  
C09000665

內容

摘要

1. 緣起	1
2. 會議地點與日期	2
3. 會議情形	2
4. 感想	3
5. 附件	

## 摘要

2001 年太平洋區通信者高階會議(PPM)暨太平洋電信協會年會會議(PTC), PPM 會議訂於 2001 年 1 月 10 日至 12 日在夏威夷 Maui 島舉行。會議由 Concert 主辦, 亞太地區共十一個會員(Concert, SingTel, TM, KT, KDDI, CHT, PLDT, Indosat, CAT, Telstra, TNZLD)參加。每年舉辦年初、年終會議, 很多屬於多邊、雙邊合作或區域性共同關切的問題, 都利用這種場合進行高階層政策面的會議溝通, 各國電信高階首長大都親自率團出席。本公司出席代表由國際分公司沈清文副總率同業務處長周錦源, 國際關係處處長吳枝珍與電信研究所所長梁隆星一同參加。PTC 會議訂於 2001 年 1 月 14 日至 18 日在夏威夷 Honolulu 島舉行, PTC 係一個非營利、非政府的國際組織, 提供其會員有一個共同討論電信及資訊服務理念的場所, 並藉由論壇(Forum)之形式, 共同關心電信政策、網路技術、法律科技及學術等。其活動方式有 Workshop Seminar, Exhibition 等。本人此次應邀於 PTC 研討會上做專題演講, 題目: “Call Center Based Mobile Commerce” 此次研討會有世界著名研究機構及電信大廠代表參加, 並有廠商產品展示活動展出多項最新穎之電信軟硬體產品, 收穫良多, 可供本所及公司考。且職已在所內做過詳細之心得報告。附件為本人在中華電信研究所對同仁所作之報告, 請參考。

## 1. 緣起

本年(二〇〇一年)太平洋電信協會年會會議,主辦單位約在一年前寫信給本人,邀請本人參加 PTC2001 年年會會議,本人依大會主辦單位之重點主題之一的電子商務,草擬報告題目” Call Center Based Mobile Commerce” 一篇投稿,蒙大會接受並應邀於年會中宣讀,因此代表中華電信研究所參與此次會議,由於工作安排及元月十九日將代表中華電信公司參加台灣國際標準電子董事及監查人聯席會議,因此只參加元月十五日論文發表以及十六日研討會和參觀電信展覽,於元月十四日起程至元月十七日經日本返國內。

## 2. 會議地點與日期

2.1 地點: 夏威夷 Hilton Village

2.2 日期: 90.01.14 ~ 90.01.18

## 3. 會議情形

一月十四日傍晚於戶外威基基海灘的一處草地舉行 PTC2001 年開幕儀式典禮, 簡單隆重並頒發優秀學生論文獎, 會中巧遇 NTT Communications 三好先生(Vice President), 三好先生過去負責 NTT 國際部門中國事務部與本人有多次見面機會, 他鄉遇故知, 格外高興。

一月十五日開始進行 parallel sessions 論文宣讀, 依大會要求當日主講者須於當日早餐參與 speaker's breakfast 與所屬 session chairman 見面, 討論報告次序與內容。本人論文被安排在第一位報告, 同一 session 共有四位主講者。主席在議程、時間、節目導引均控制的很好, 聽眾也十分踴躍, 會後許多聽眾向本人索取報告資料, 並交換技術與市場意見, 相當重視本人的報告內容。

#### 4. 感想

第一次參與 PTC 會議且頭一次有機會來到夏威夷，此時檀島氣候十分良好，相較於台灣已進入寒冬有很大的差別。

會議地點在 Hilton Village 為一渡假休閒會議中心，相關設施均十分完善，緊臨著名的威基基海灘，遊客如織，有多棟旅館與國際會議中心及展示中心。

本人參與的分組稱為 Application Service Providers，共有由本人代表之中華電信、德國 Detecon 公司 Mr. Jochen Dinger、美國 IPX Keith Rhea 以及美國 Tycom 公司 Mr. Michael Kelly 進行論文宣讀，聽眾十分踴躍並有多位要求與本人交換名片並索取報告文稿。

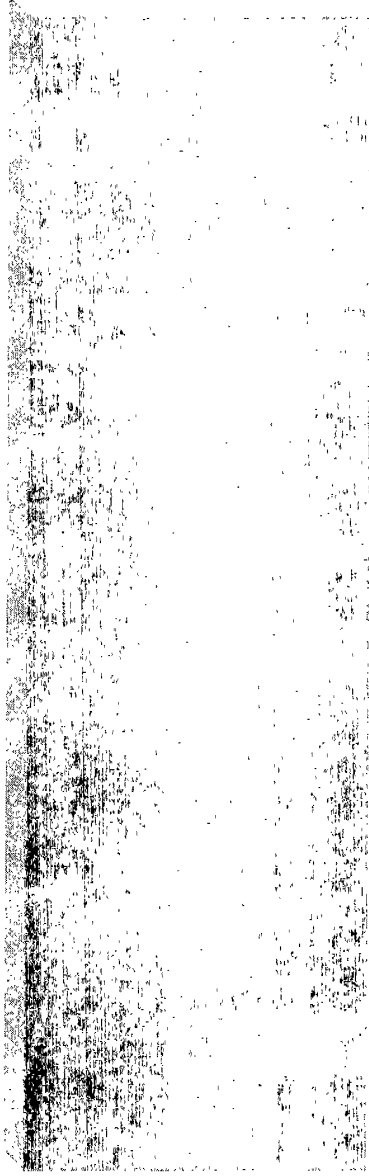
本人此次與會議只攜帶光碟片未帶個人電腦，大會提供的設備居然無 CD-ROM driver，且電源設備也未提供 220 V/110 V 轉換設備，十分不便，為大會之唯一缺點。

## 5. 附件



ChungHwa Telecom

# *PTC 2001*



Dr. Lung-Sing Liang

President

Telecommunication Laboratories, ChungHwa Telecom, Taipei

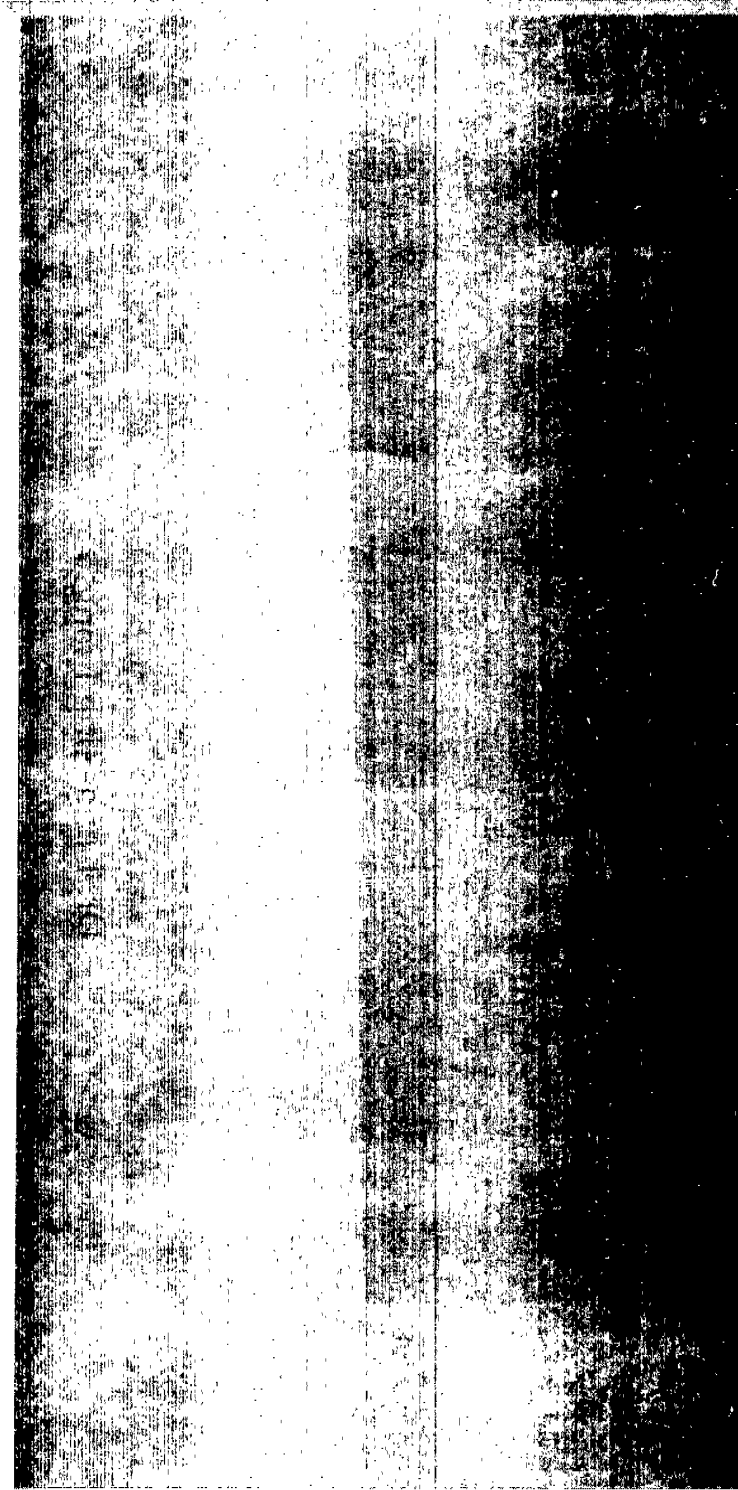
January 15, 2001





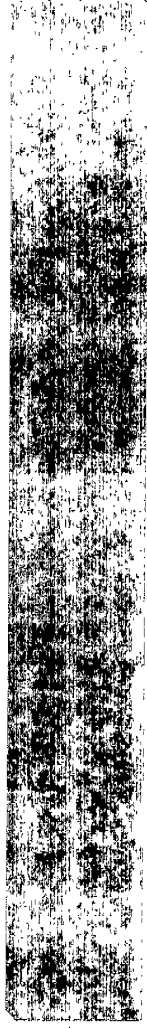
ChungHwa Telecom

# Agenda





# Agenda

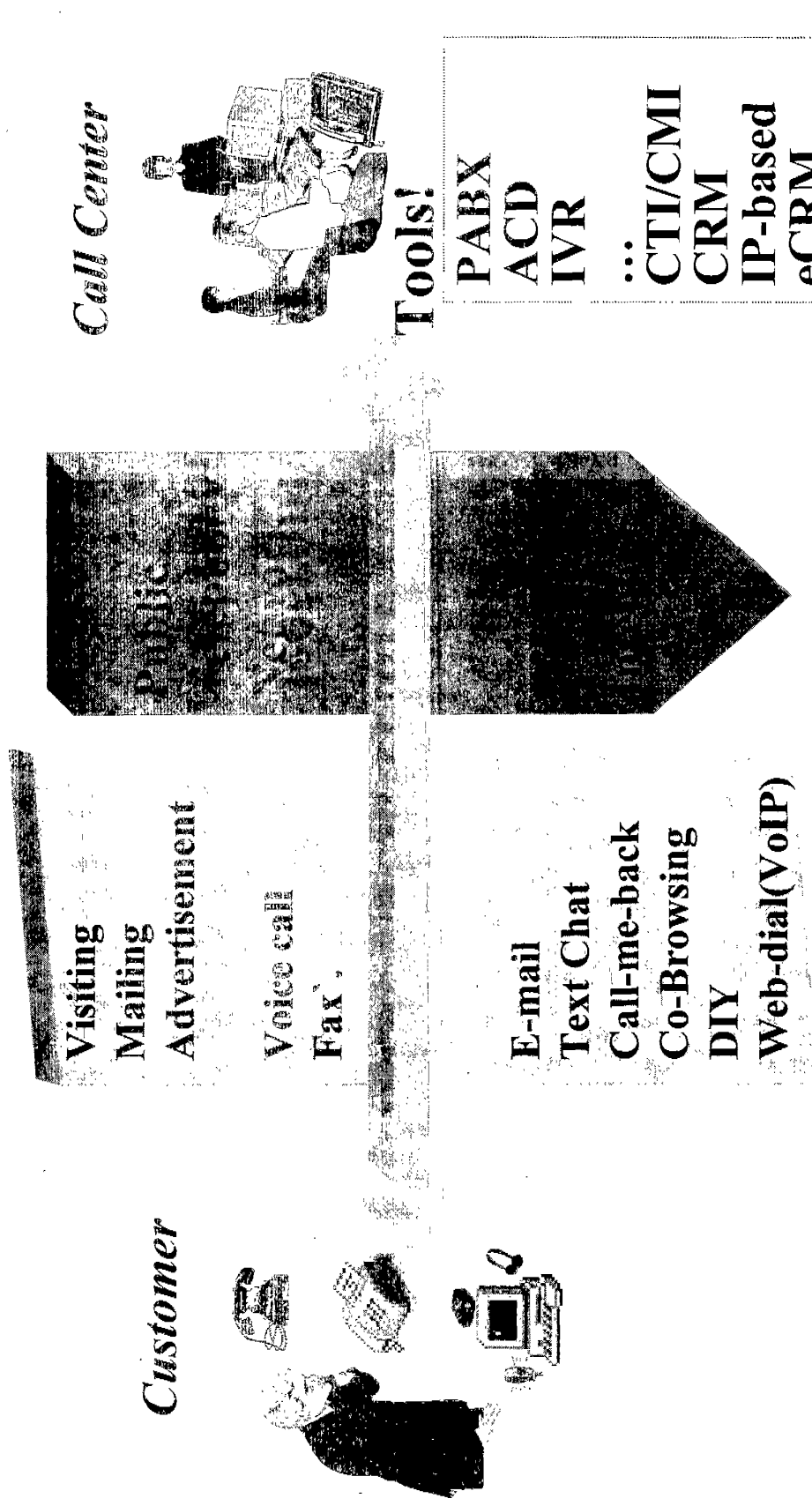


- ◆ **Goal of CIIT's Call Centers**
- ◆ **Basic Architecture**
- ◆ **Internet-based Electronic Commerce**
- ◆ **Mobile Commerce through Call Center**
- ◆ **Summary**

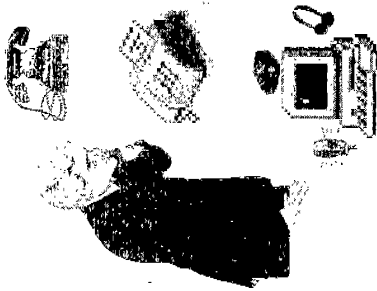


ChungHwa Telecom

# Background



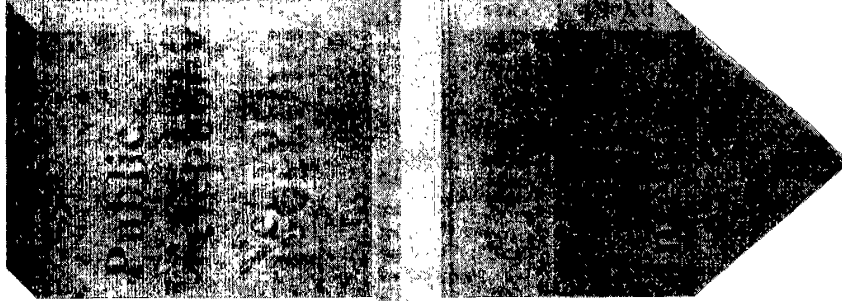
*Customer*



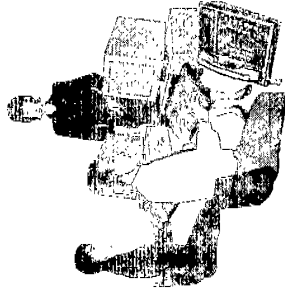
Visiting  
Mailing  
Advertisement

Voice call  
Fax

E-mail  
Text Chat  
Call-me-back  
Co-Browsing  
DIY  
Web-dial(VoIP)



*Call Center*



**Tools!**

PABX  
ACD  
IVR

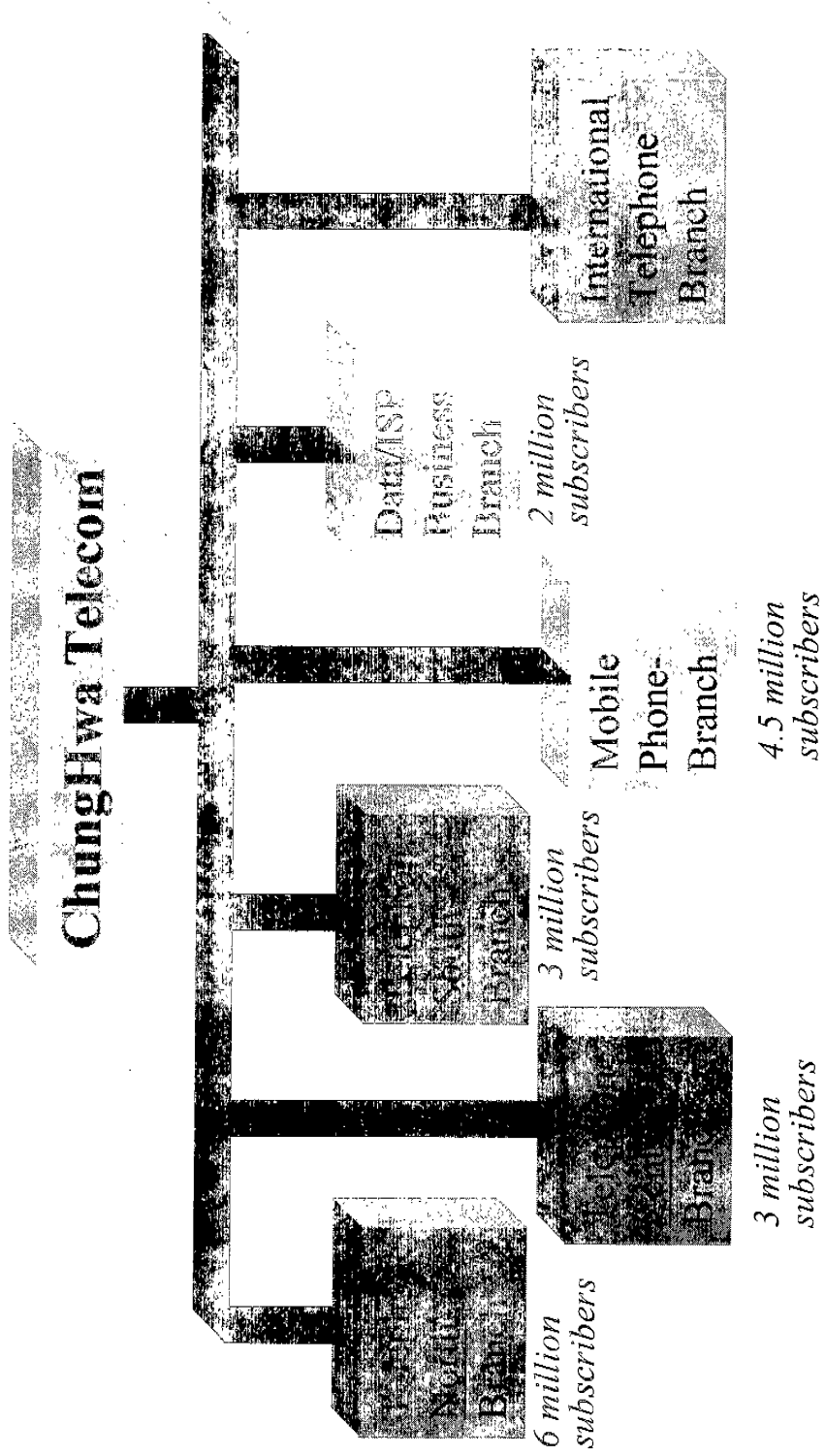
...  
CTI/CMI  
CRM  
IP-based  
eCRM

Related Servers



ChungHwa Telecom

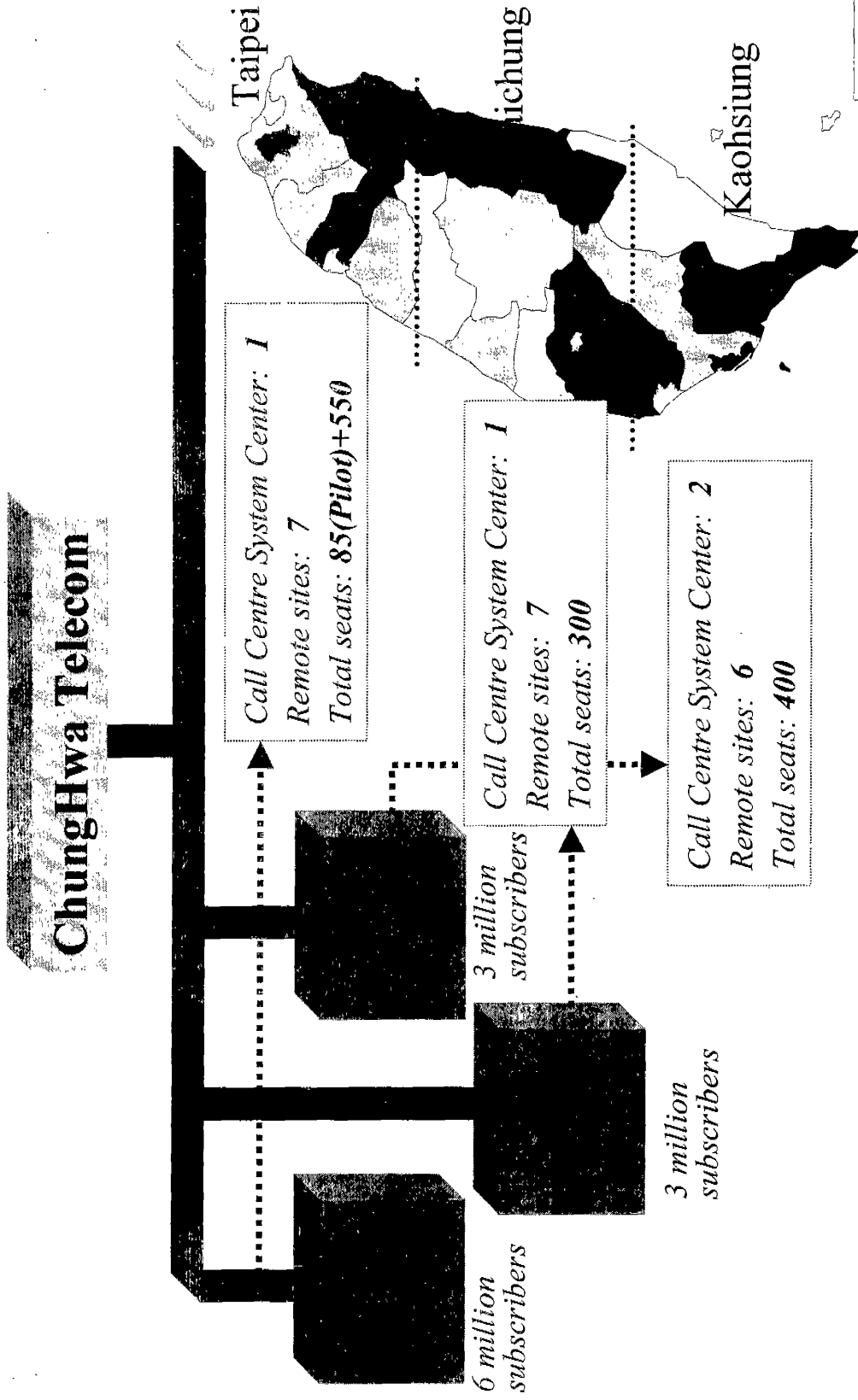
# Background





ChungHwa Telecom

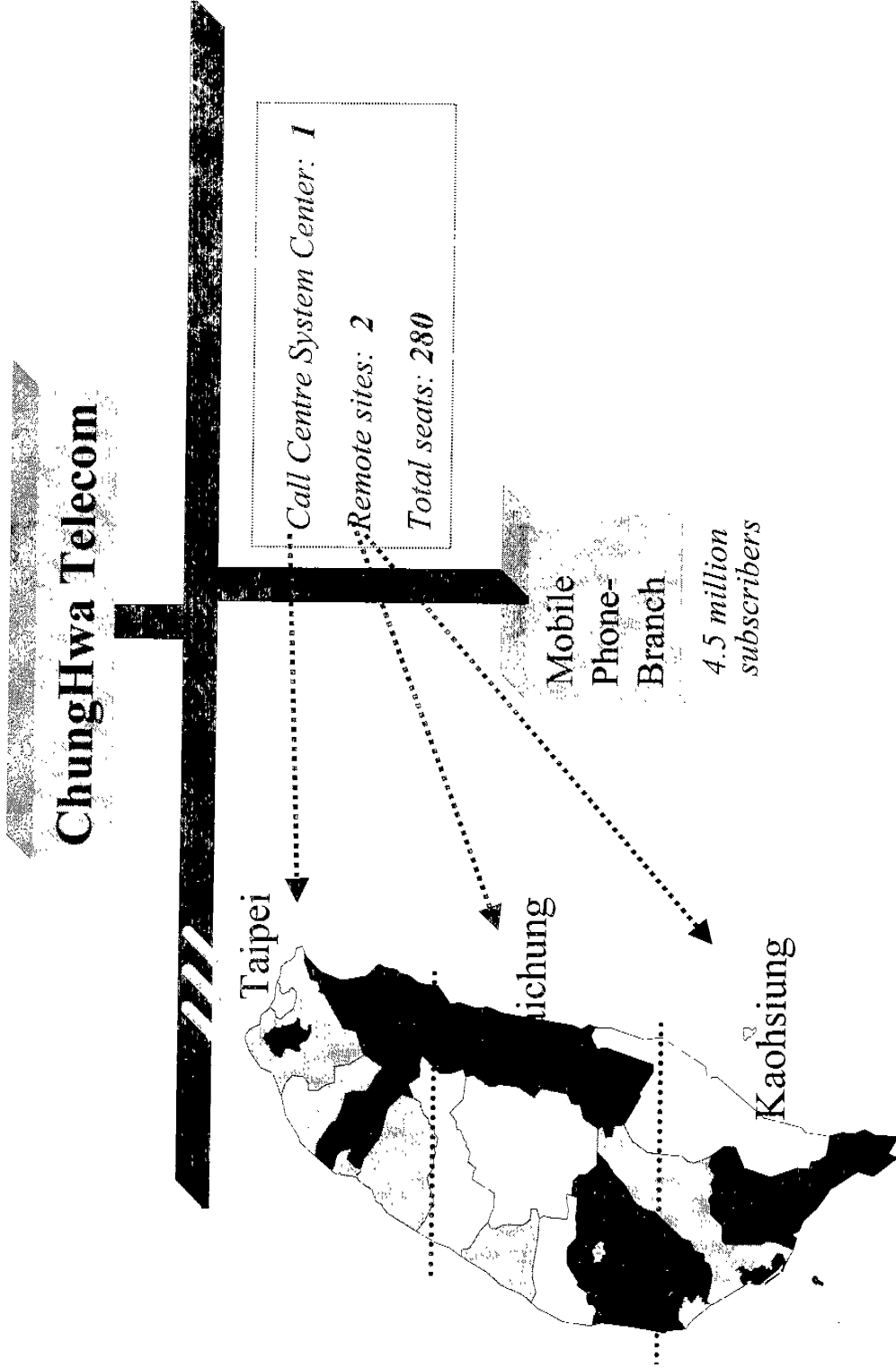
# Background





ChungHwa Telecom

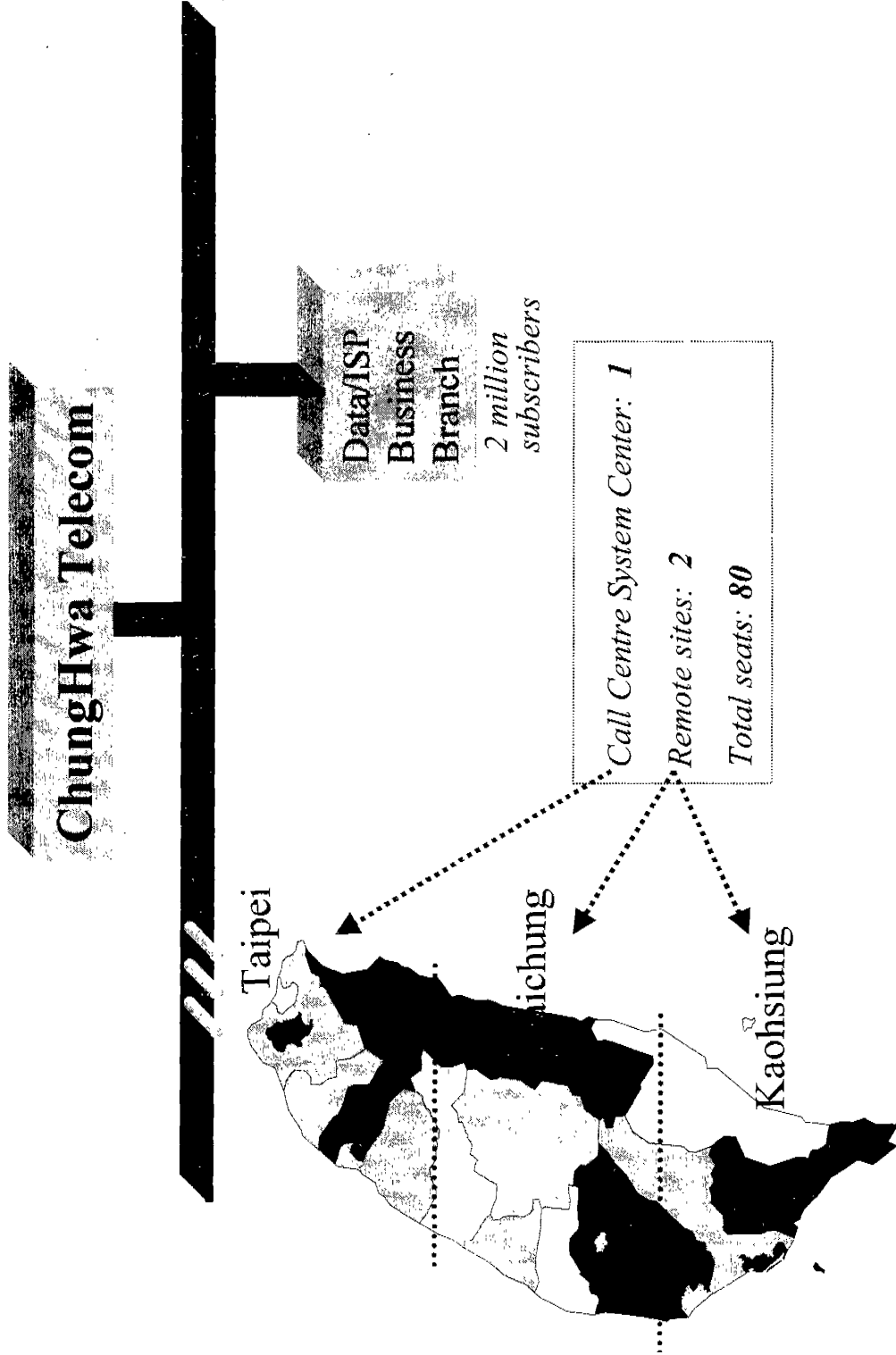
# Background





ChungHwa Telecom

# Background

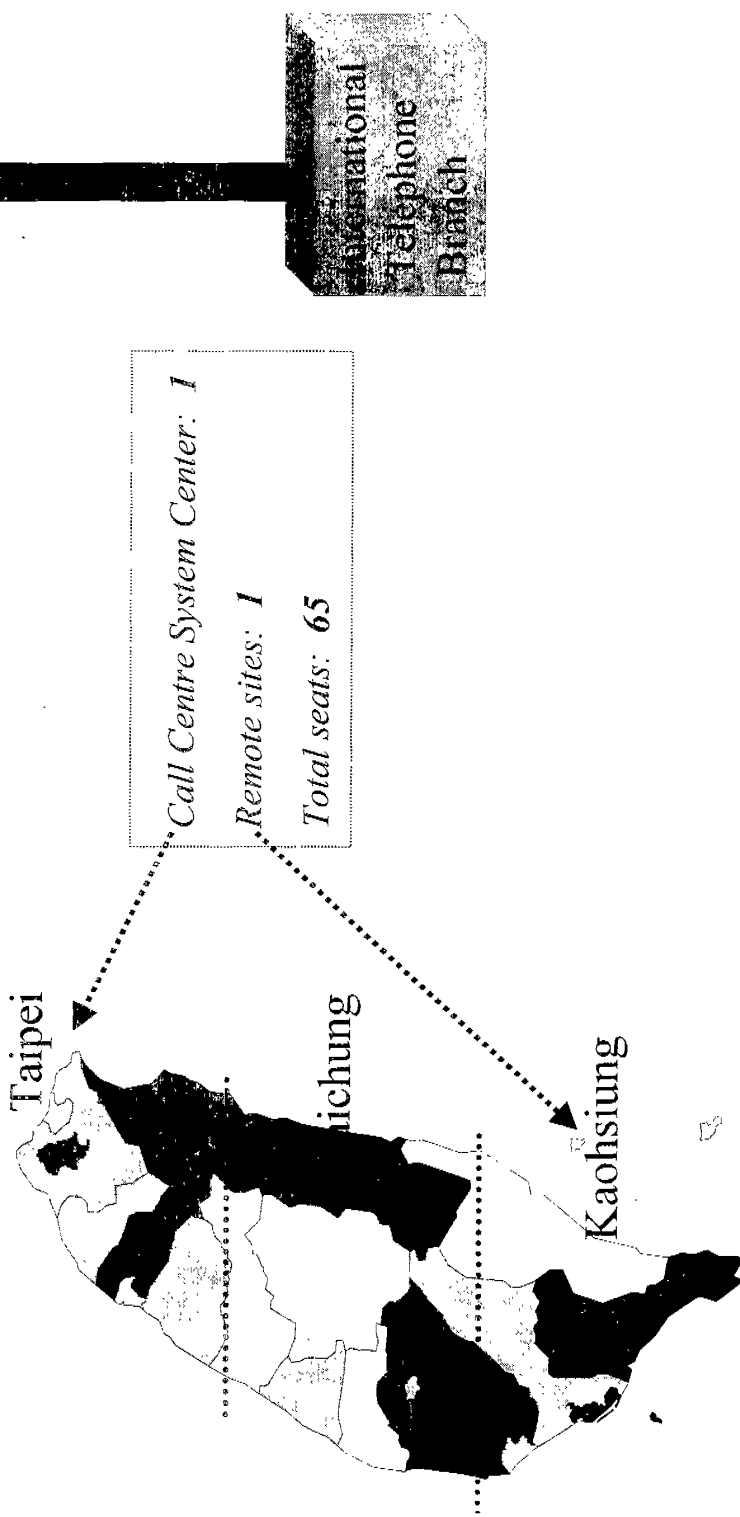




ChungHwa Telecom

# Background

## ChungHwa Telecom

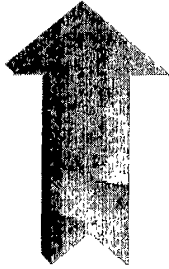






# *Agenda*

◆ Background



◆ Basic Architecture

◆ Internet-based Electronic Commerce

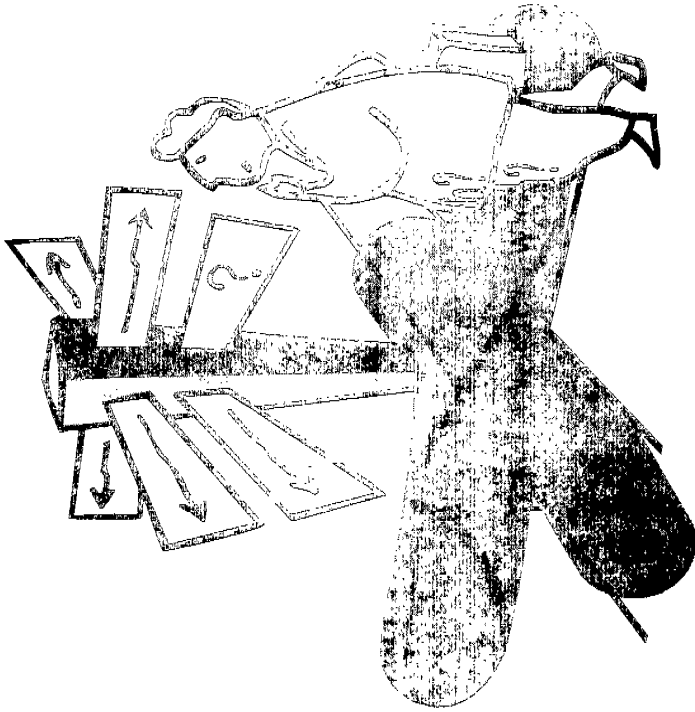
◆ Mobile Commerce through Call Center

◆ Summary



ChungHwa Telecom

*InBound  
OutBound  
Blended  
Outsourced*

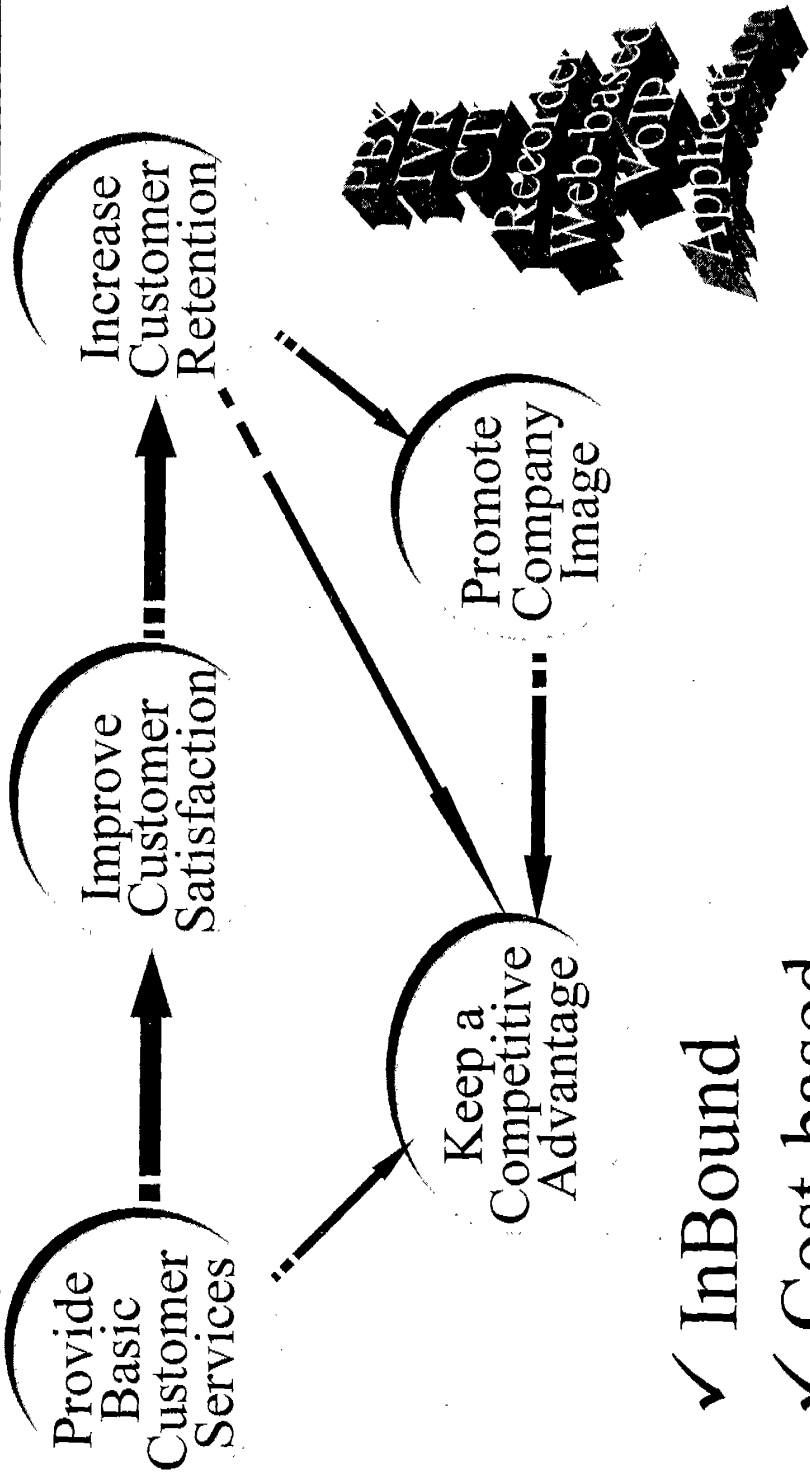


**IP  
Voice  
VPN  
Webcast  
VOIP  
Security  
Application**

**Cost-based  
Profit-based  
EC/Mobile Commerce  
ASP**



ChungHwa Telecom



✓ InBound

✓ Cost-based

✓ CTI

▪ Inbound Screen Pop	20 %
▪ Voice and Screen Transfer	10 %
▪ Automatic Call Back	20 %
▪ Data Directed Call Routing	25 %



ChungHwa Telecom

# Goal of CHT's Call Centers

## Cost-based InBound Service

Customer



Call

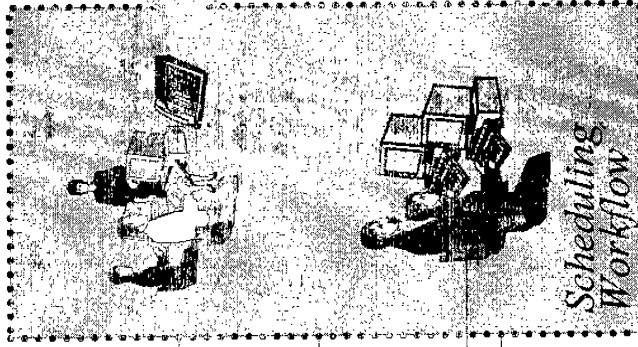
PABX/  
ACD  
Queue

Fax.  
E-mail

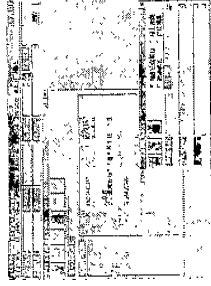
IVR  
Flow

CTI  
Integration

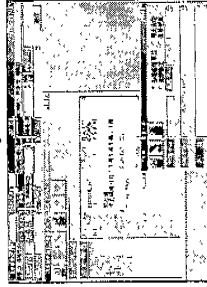
Web  
VoIP



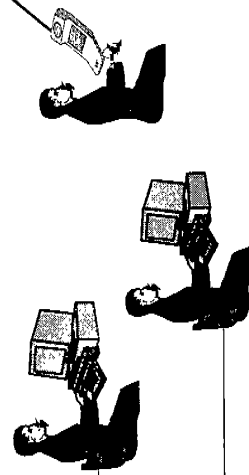
Help Desk/Operational CRM



DW/ Analytic CRM



- Software Phone
- Inbound Screen Pop
- Voice and Screen Transfer
- Automatic Call Back
- Data Directed Call Routing



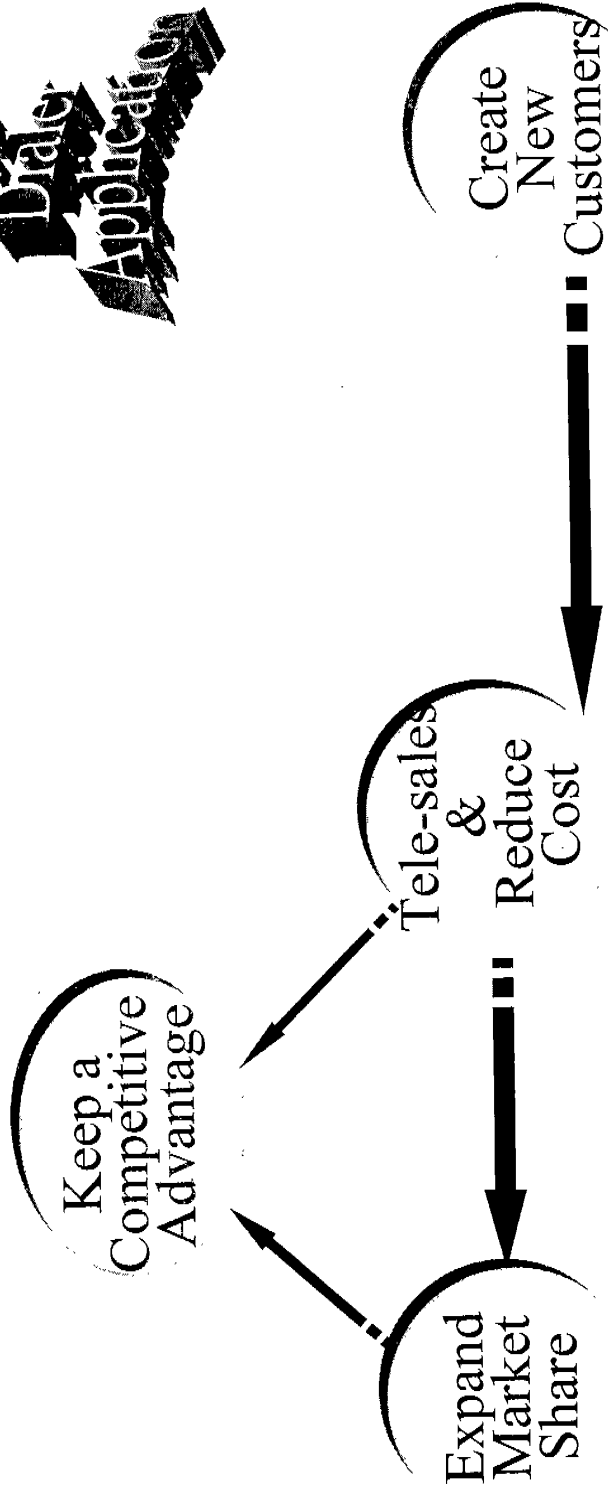


ChungHwa Telecom

- ✓ OutBound
- ✓ Profit-based
- ✓ CTI

Time=Money in a Call Center !  
▪ Predictive Dialing 300 %

PBX  
IVR  
CTI  
Dialer  
Application

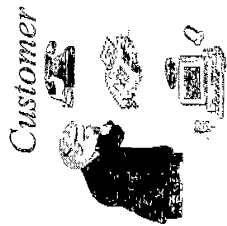




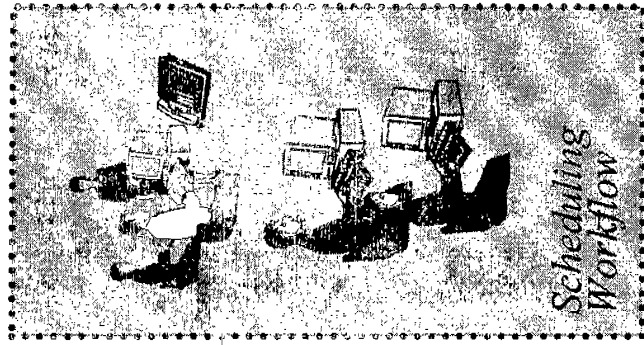
ChungHwa Telecom

# Goal of CHT's Call Centers

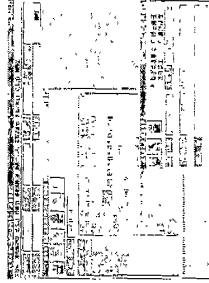
## Profit-based OutBound Service



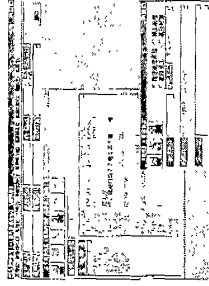
PABX  
Dialer  
IVR  
CTI  
Integration



Help Desk/Operational CRM



DW/ Analytic CRM



- Preview Dialing
- Progress/Power Dialing
- Predictive Dialing



ChungHwa Telecom

Provide Basic Customer Services

Improve Customer Satisfaction

Increase Customer Retention



Keep a Competitive Advantage

Promote Company Image



Call Center Service Scope (300 Functions)

Expand Market Share

Tele-sales & Reduce Cost

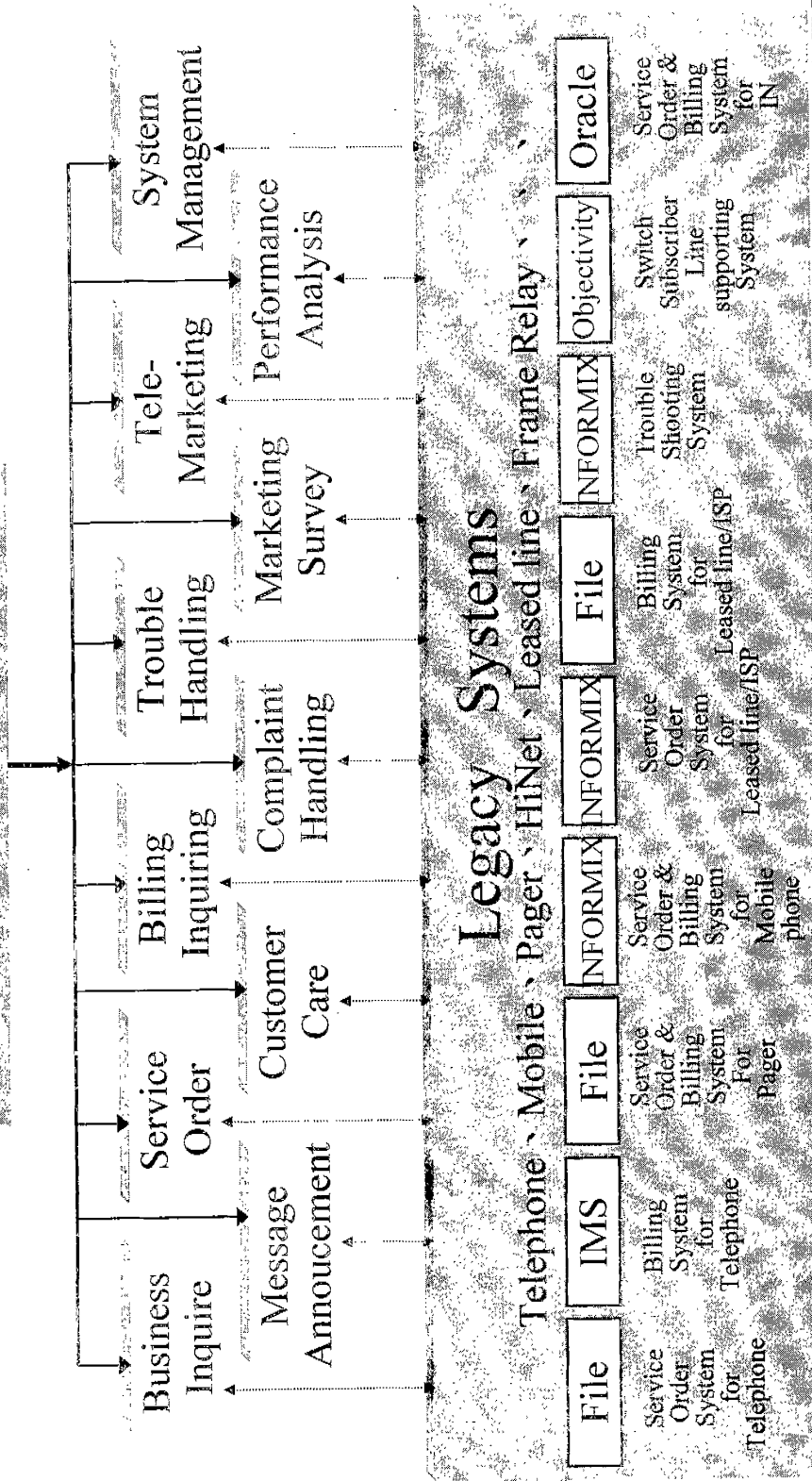
Create New Customers

Call

# Goal of CHT's Call Centers

ChungHwa Telecom

## Call Center Service Scope (300 Functions)



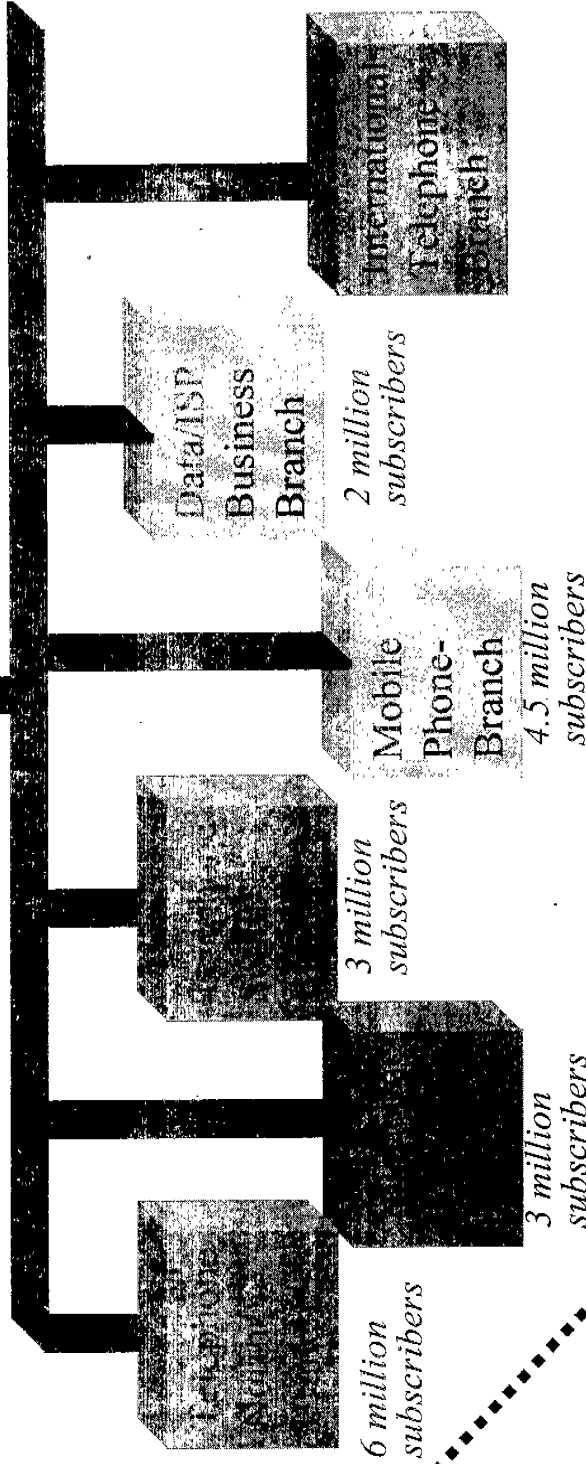




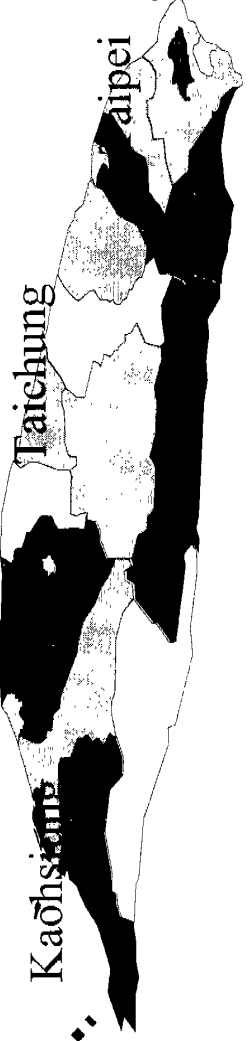
ChungHwa Telecom

# Goal of CHT's Call Centers

## ChungHwa Telecom



## a Multi-Site Call Center!






ChungHwa Telecom

# Agenda

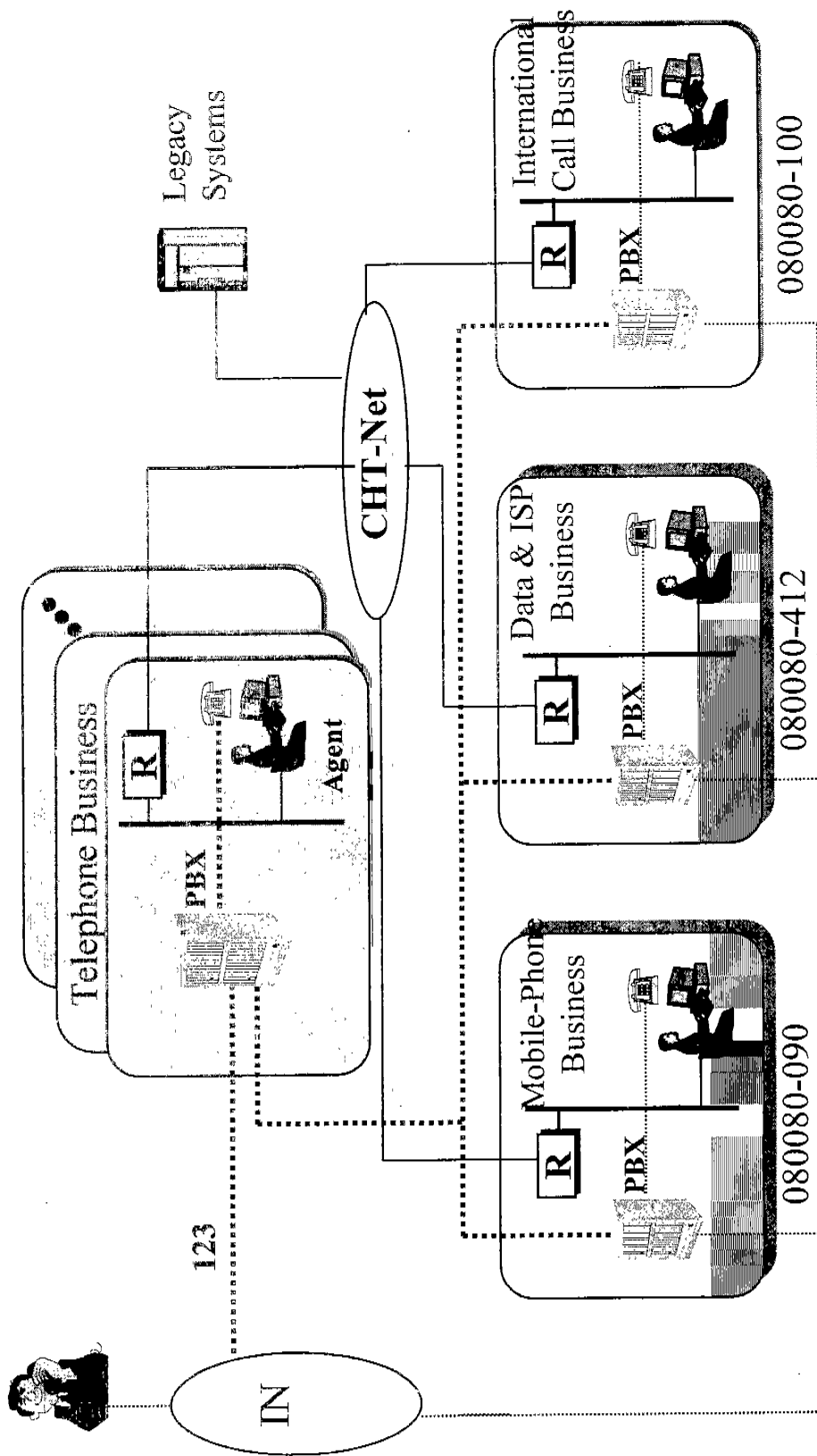
---

- ◆ **Background**
- ◆ **Goal of CHT's Call Centers**  

- ◆ **Internet-based Electronic Commerce**
- ◆ **Mobile Commerce through Call Center**
- ◆ **Summary**



ChungHwa Telecom

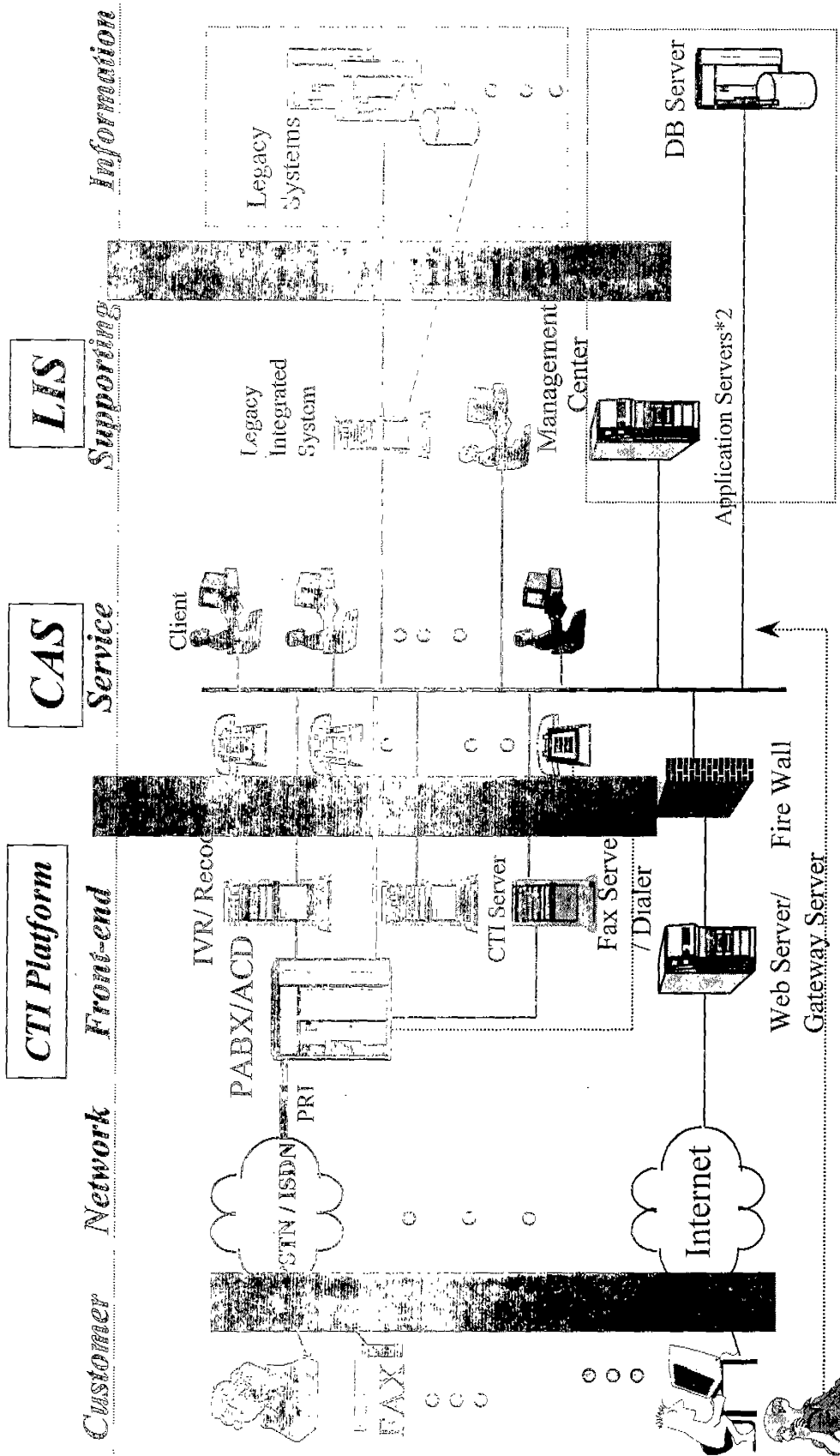
# Basic Architecture





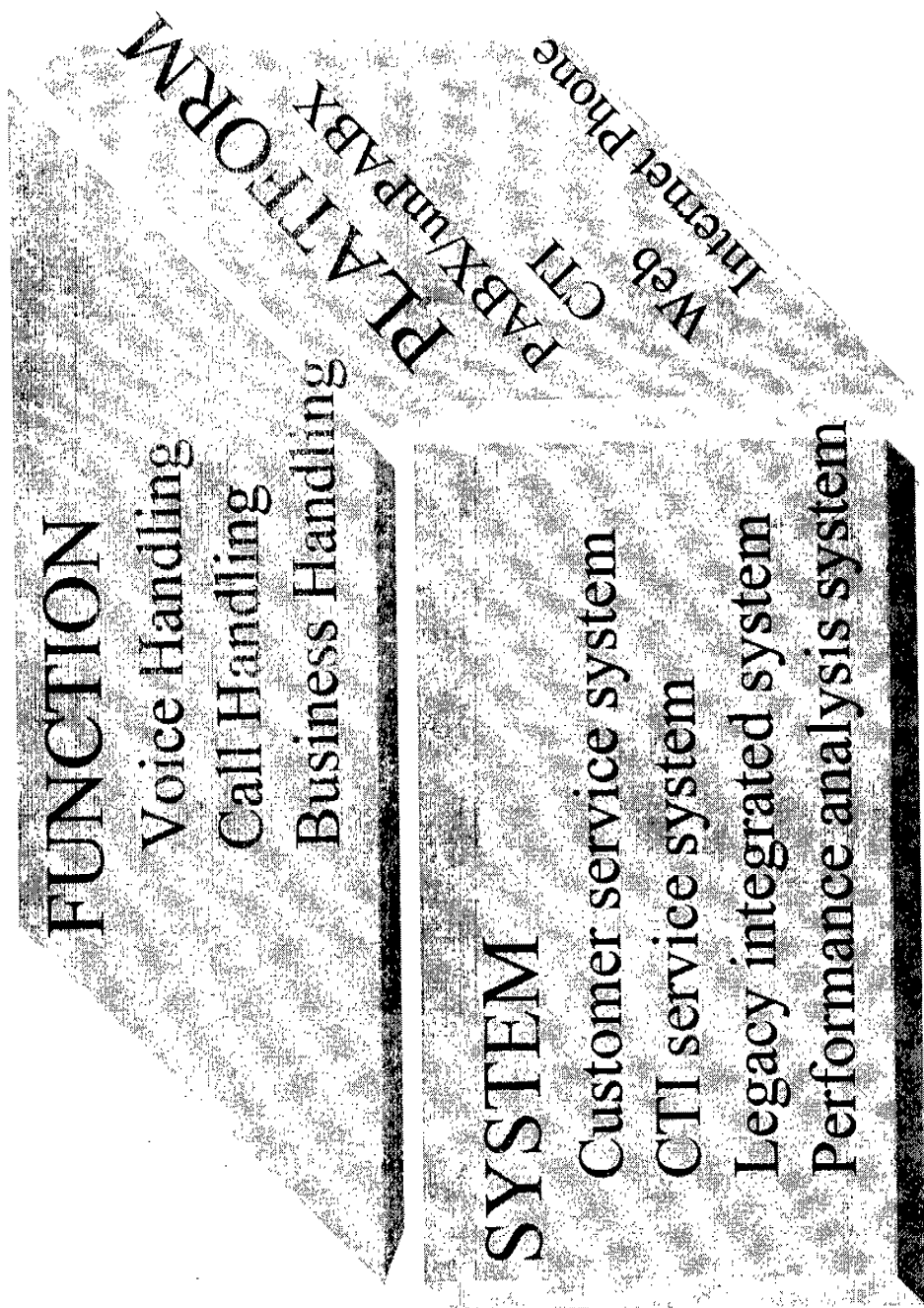
ChungHwa Telecom

# Basic Architecture



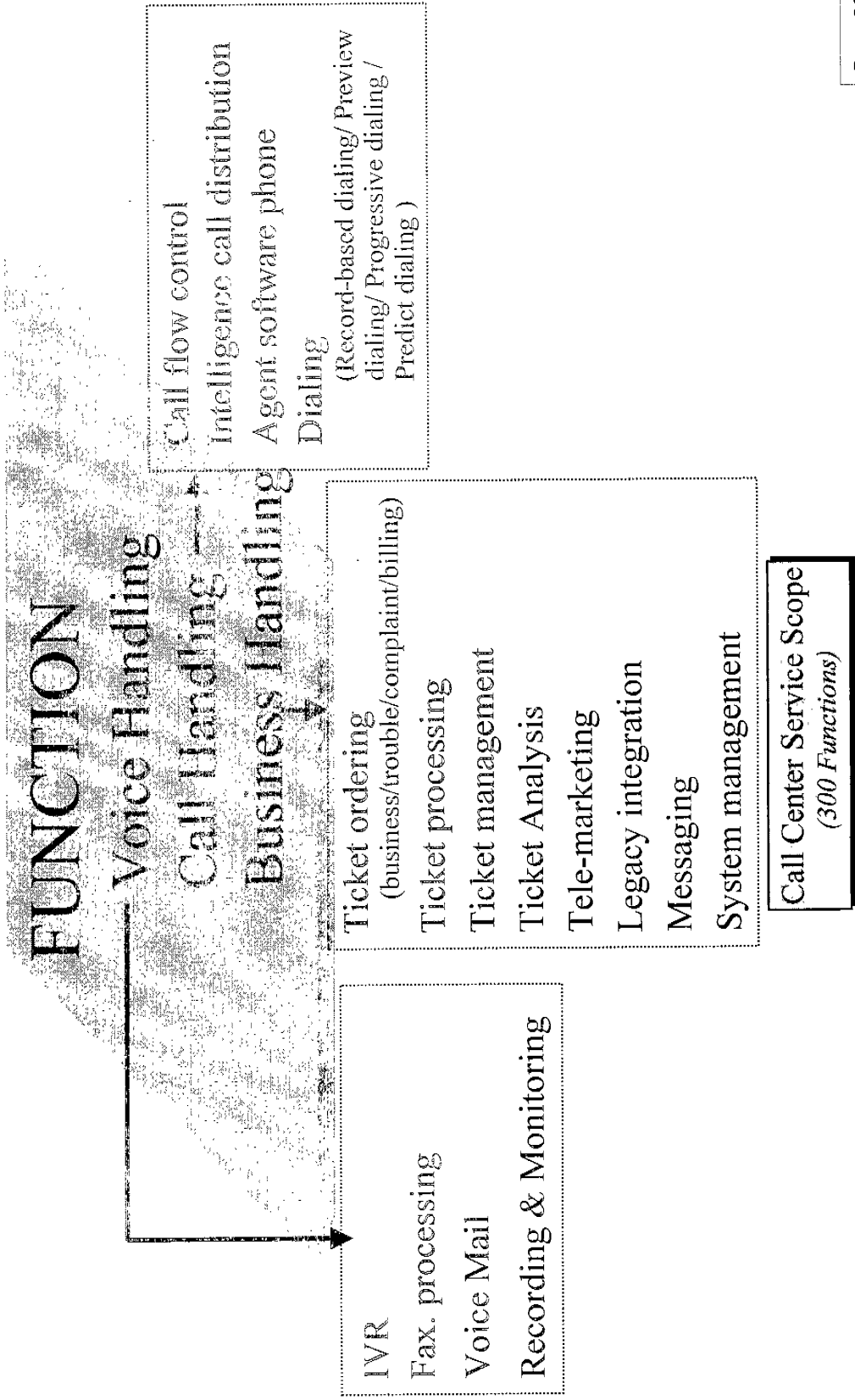


# Basic Architecture



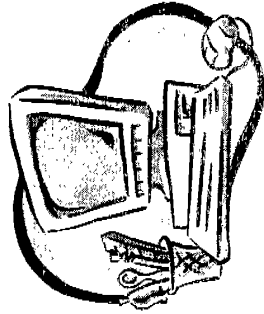


# Basic Architecture





# Basic Architecture



HelpDesk Systems  
CRM Software  
Specific System

PABX  
IVR  
Dialer  
Recorder  
CTI Server  
FAX Server  
Network  
DB Server

**SYSTEM**

Customer service system  
CTI service system  
Legacy integrated system  
Performance analysis system

Integration of  
the Legacy Systems  
Data Warehousing

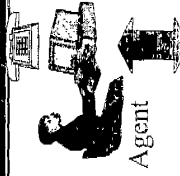
Real Time/Non-Real Time Reporting and Analyzing Systems  
Scheduling and Management Systems



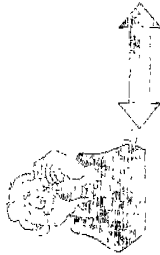
ChungHwa Telecom

# Basic Architecture

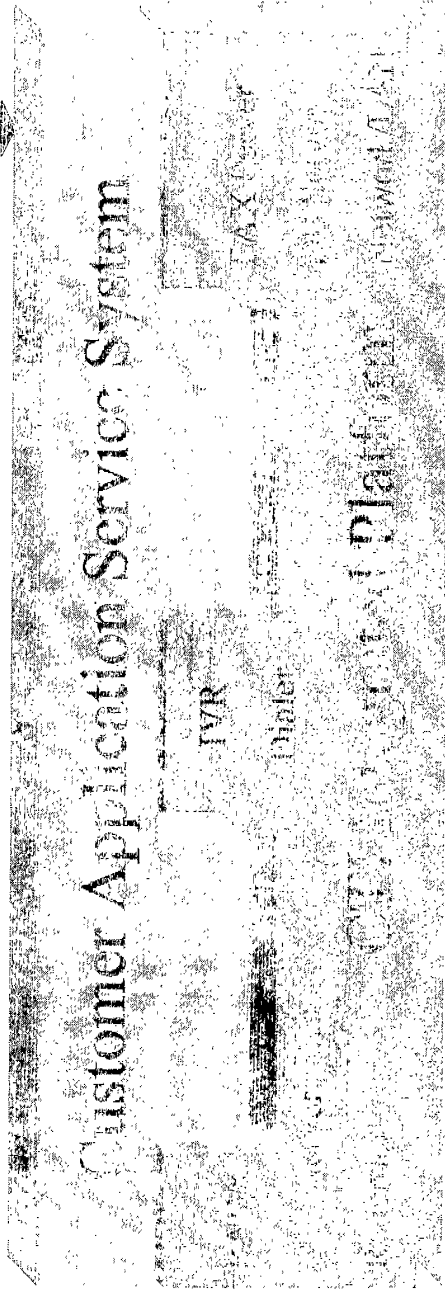
## Replaceable 3-Tier Architecture



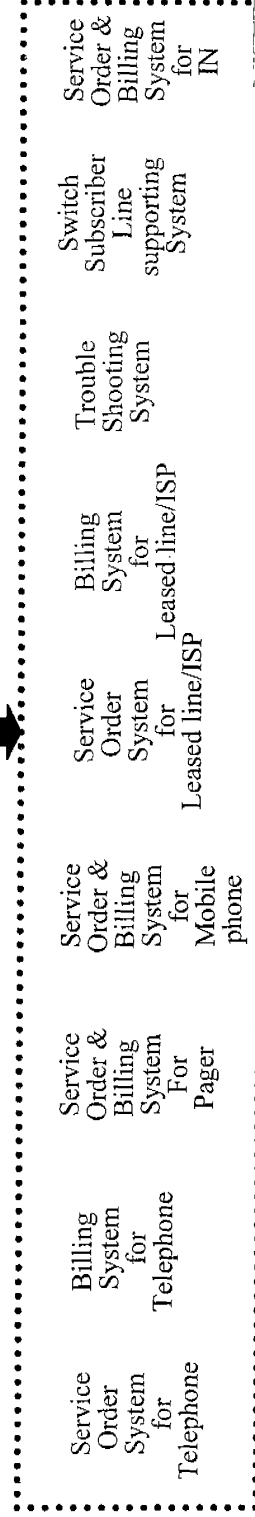
Agent



Customer



## Legacy MD System







ChungHwa Telecom

# Customer Application Service System

【中華電信 123 客戶服務中心】【管理席】

## 123 客戶服務中心

- |        |        |
|--------|--------|
| 值機席    | 基本資料管理 |
| 重要訊息管理 | 系統管理   |
| 記錄單管理  | 資料轉載   |
| 統計報表   | 其他功能   |
|        | 離開     |



中華電信  
123 客戶服務中心





ChungHwa Telecom

# Customer Application Service System

《中華電信 123 客戶服務中心》(選擇器)

來電轉接 (C) 查詢 (Q) 行銷 (M) 業務 (S) 服務 (R) 其他功能 (O) 關閉 (N) 幫助 (H)

查詢號碼: 0933188988    聯絡人: 曾    客戶類別: GSM

聯絡電話: 0933188988

來電轉接 (C) 查詢 (Q) 行銷 (M) 業務 (S) 服務 (R) 其他功能 (O) 關閉 (N) 幫助 (H)

行銷通話客戶服務支援系統企業網站

上一步   下一步   重新整理   關閉

## 客戶服務支援系統企業網站

- 系統公告
- 障礙申告
- 抱怨需求
- 通訊不良
- 停/替話
- 業務諮詢
- 綜合查詢
- 操作說明

### 障礙申告

請輸入客戶號碼: [0933188988]     國際漫遊

請輸入聯絡人: [曾]     小姐     先生

請輸入聯絡電話: [0933188988]

請點選客戶障礙發生之地區(若為國際漫遊障礙, 請選擇客戶申請該大哥大或B.B.Call之地區):  北區     中區     南區

確定輸入

已連結: http://

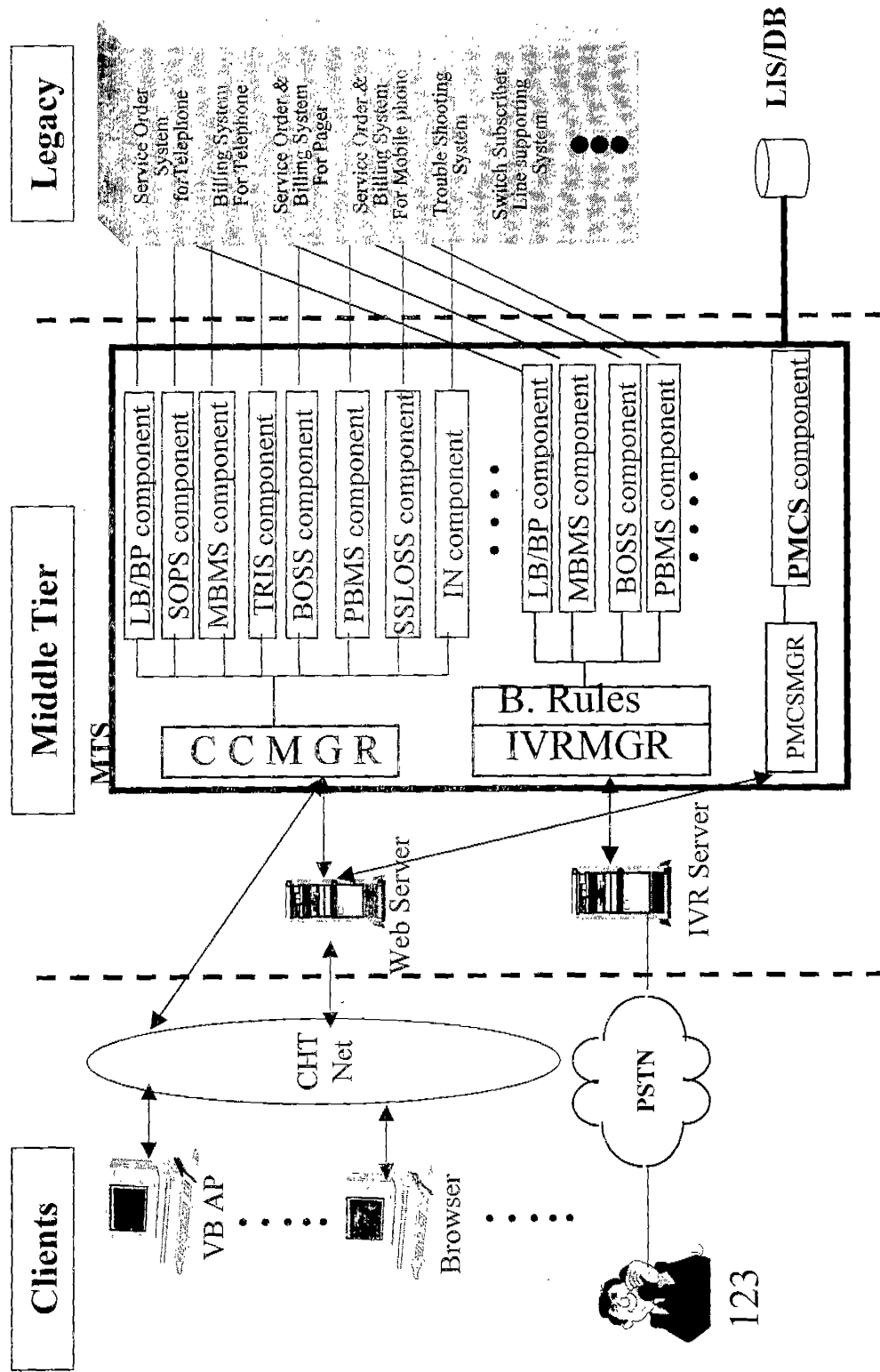
120/mpcs3intra/welcome.htm

載入完成



ChungHwa Telecom

# Legacy MD System





ChungHwa Telecom

# Basic Architecture

## Telephone-based

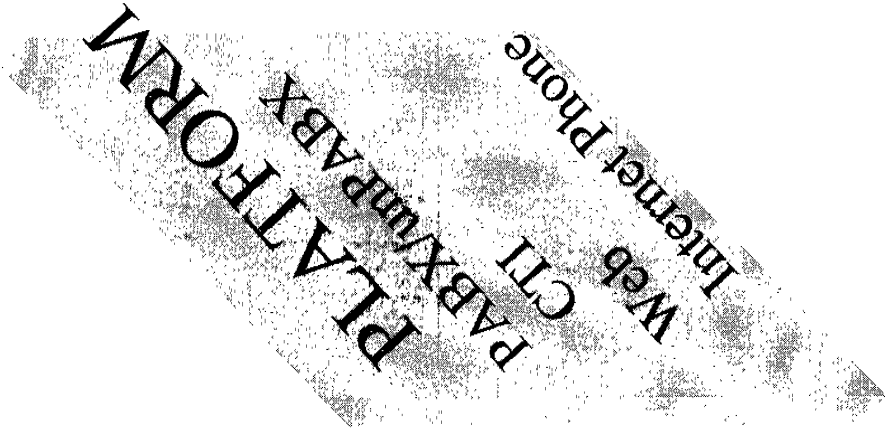
- IVR
  - Local
  - Global
- PABX
  - CTI
    - PABX Routing
    - CTI Routing
    - CTI Products/CTI Developing Tools
  - Non-CTI
- unPABX
  - Industry Standard/Non-Industry Standard

## Web-based

- Co-Browsing
- E-Chat
- Localization

## IP-based

- CallBack Request
- IP Telephone Gateway
- IP-Centric






ChungHwa Telecom

# Agenda

---

- ◆ Background
- ◆ Goal of CHT's Call Centers
- ◆ Basic Architecture
- ◆ 
- ◆ Mobile Commerce through Call Center
- ◆ Summary

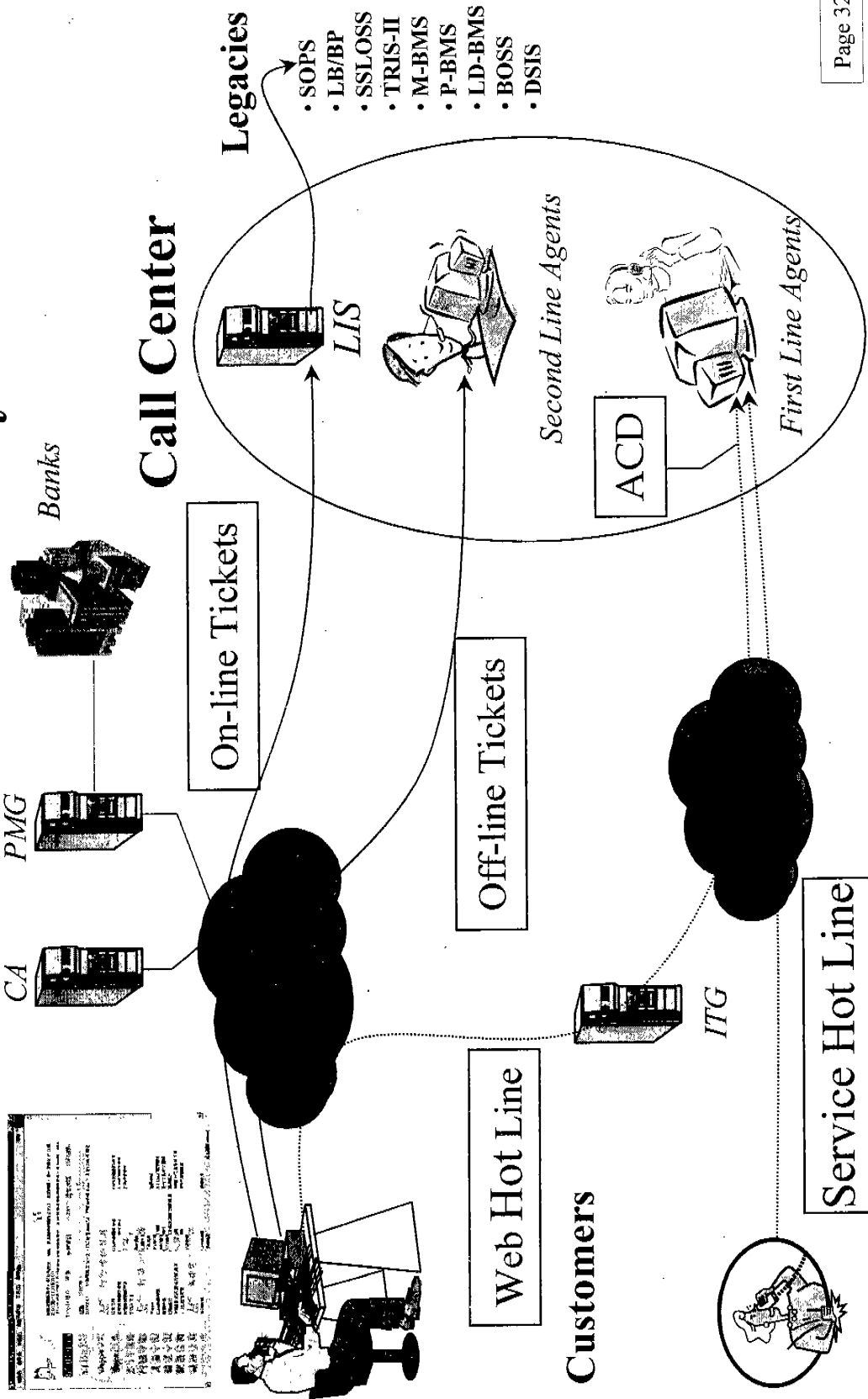




# Internet-based Electronic Commerce

ChungHwa Telecom

## CHT Web-Counter Service System





ChungHwa Telecom

# *Internet-based Electronic Commerce*

## **Features of CHT Web-Counter Service System**

- All services are offered: fix line, mobile phone, IN, digital line, international call, etc.
- Information about a lot of activities available: discount activities, bulletin board, services offered, service center, Q&A.
- Services: ordering, change request, special functions, suspension, bill request, calling record, trouble shooting, status inquiry, financial statement, opinion input , etc.
- Electronic services: e-billing, e-receipt, web-payment , etc.
- Bulk processing: a bulk of billing addresses can be changed at one stroke , etc.
- Automatic operation: accessing legacy systems via LIS, achieving total automation.
- Close cooperation between web-counter and Call Center: sharing equipment, functions, data, action to save cost and provide integrated services.
- Customers can be kept informed via web: status on orders filled both on web and with Call Center are available on web.
- Integrated business operation: information flow, money flow, material flow are integrated for access from.
- Security for business transaction: authentication procedure provides security for business transaction.

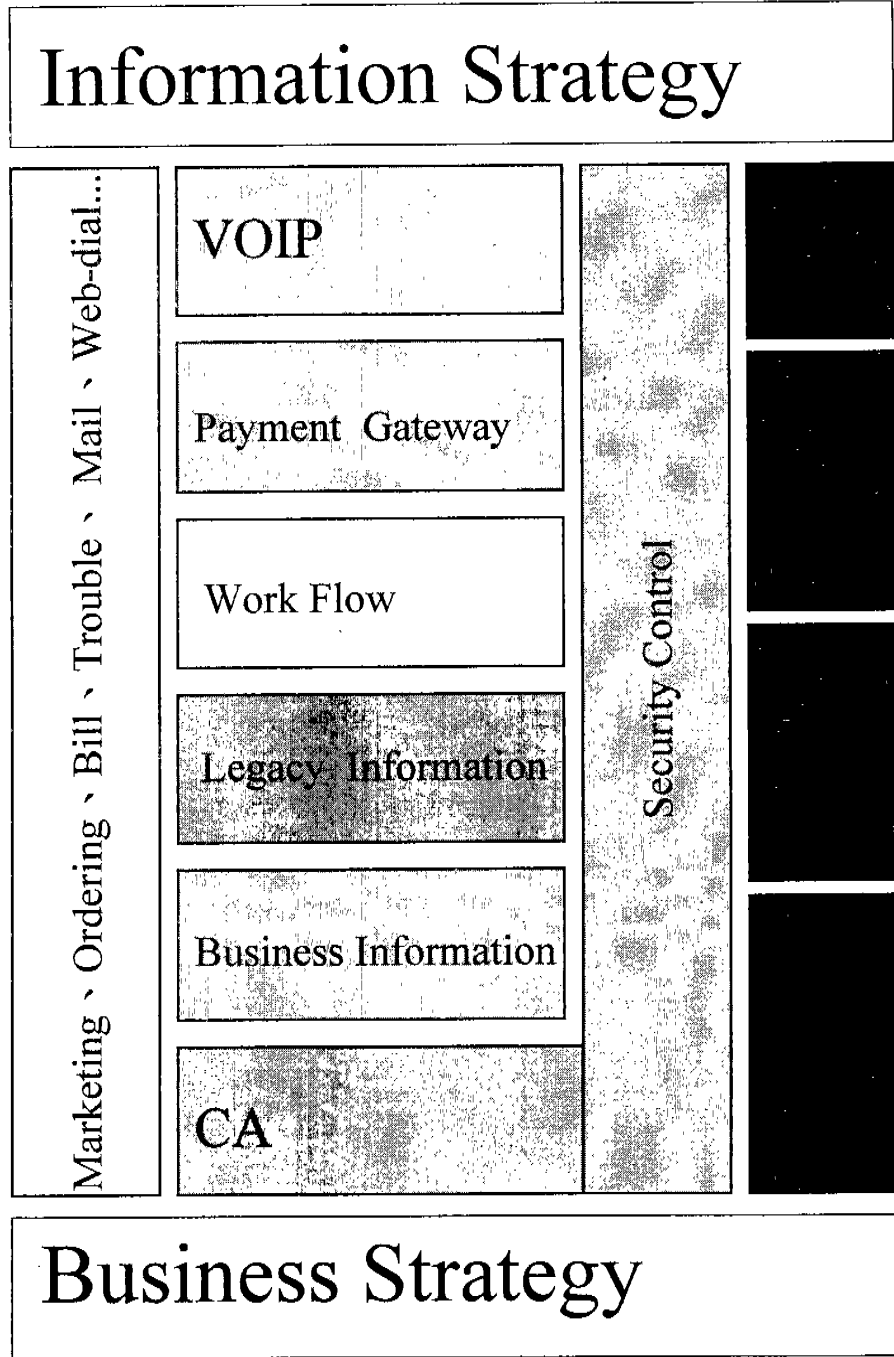




# Internet-based Electronic Commerce

ChungHwa Telecom

## Structure of CHT Web-Counter Service System



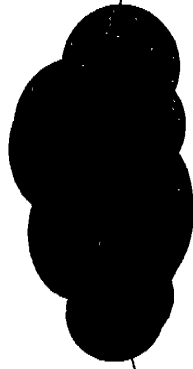
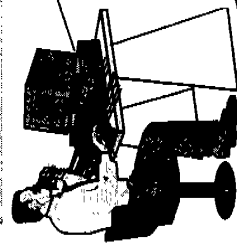
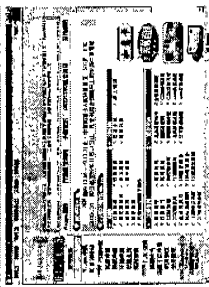




ChungHwa Telecom

# Internet-based Electronic Commerce

## Mobile Phone On-line Ordering Service



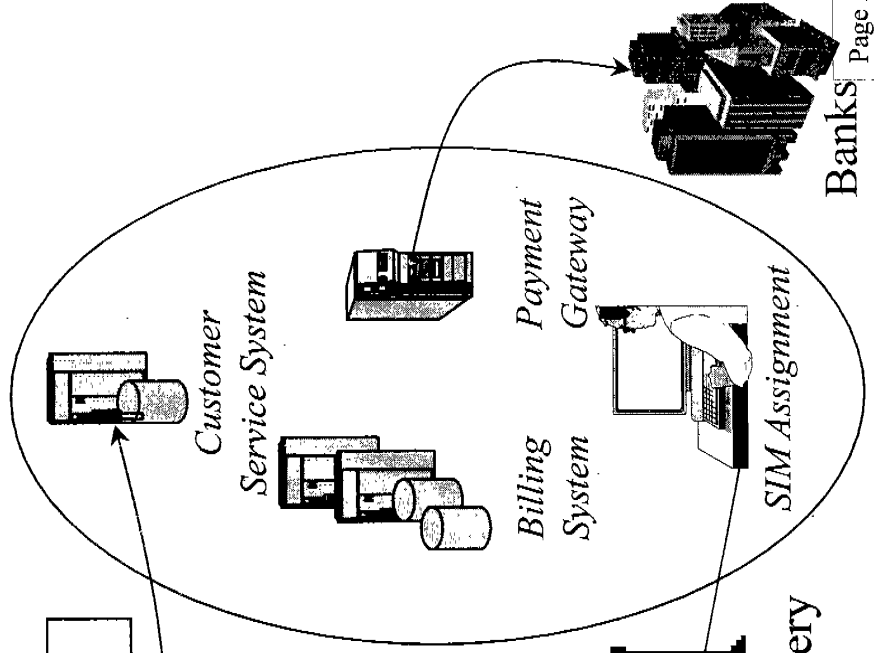
Order

By Mail

By Man



SIM Delivery Offices



Banks



ChungHwa Telecom

# Internet-based Electronic Commerce

## Mobile Phone On-line Ordering



門號申請 Microsoft Internet Explorer

### 門號申請



客戶號碼: 0937111111 申請時間: 2000/8/3 14:00

**租用人資料**

名稱: 關雅芳 身分證號: S224818658 身份證號發給: E-Mail: yfan@  
 出生日期: 70/12/21 聯絡電話: (02)23262447  
 行業別: 工商貿易 現有門號: 0937528998 現有門號SIM: 現存門號SIM

本公司現有行動電話客戶享有免設定

**持用人資料**

名稱: 關雅芳 身分證號: S225897665 身份證號發給: E-Mail: jun@ms46.hinet.net  
 出生日期: 76/3/2 聯絡電話: (02)23262447

優惠方案: 八九年第三季行動電話促銷活動-c 案  
 套裝費率: 200標準型 是否列印通話明細:  不要  
 特別業務:  檢登話限制  檢登話明細  檢登話不顯示  《清除》

保證金: 500 + 設定費: 500 = 合計: 1000

門號申請 Microsoft Internet Explorer

### 門號申請

請用滑鼠點選欲申租的行動話號: [0921666444 (新裝機)]

**注意** 以下是在站長特別熱情推薦的話號呢!

091200011	0913123455	0918191919	0919272333	0919500600
0915851585	0916886688	0919888875	0919888893	0919898999
0921000000			0921000083	0921000004
0921035723	0921111303	0921456456	0921488100	0921486387
	0921666444	0921684357	0921830896	
0921352741	0921951753	0921951851		0921953352
0928000001	0928000002	0928010003	0928000004	0928000005
0928011011		0928111112	0928457454	092888107
0928555666	0928845151	0928858789	0928888888	0929000352
0928999888	0932000000	0932123456	0932222222	0932333333
0932456789	0932545486	0932578213	0932666511	0932666666
0932666888	0932833392	0932833393	0932833394	0933033579



ChungHwa Telecom

# Internet-based Electronic Commerce

## CHT Web Hot Line Services

http://www.080080090.com.tw/090/Welcome.asp - Microsoft Internet Explorer

檔案(F) 編輯(E) 檢視(V) 格式(O) 工具(T) 說明(H)

網路服務之行動通信業務新增"費率"單元, 可查到各項行動及加值

**中華電信** 080080090

Wap 業務 | 行動通信業務 | 常見問題 | 手機資訊 | 080080090 語音流程 | 服務據點

**網頁熱線**

當您在使用 www.080080090.com.tw 方面有任何困難需要協助時, 您可以利用「意見信箱」或打 080080090 電話外, 也可以選擇「網頁熱線」透過網路與技術人員或 080080090 客服人員通話。(請確認用戶端所需之軟體硬體需求、操作說明及注意事項)

**耳機麥克風測試**

1. Pentium 或同等級以上的 CPU, 作業系統為 Windows 95/98/NT。  
 2. RAM: 16MB ↑ (Windows 95/98); 32MB ↑ (Windows NT)。  
 3. PCI 界面的全雙工音效卡。  
 4. 效果良好的耳機(或喇叭)、麥克風(建議採用頭戴式耳機麥克風)。  
 5. Microsoft Internet Explorer 5.0 ↑ 或是 Netscape Navigator 4.0 ↑。  
 6. 上網連線速率在 28.8 Kbps 以上。

若使用頭戴式耳機麥克風, 請於測試時勾選 "I am using headphones"

**Agents**

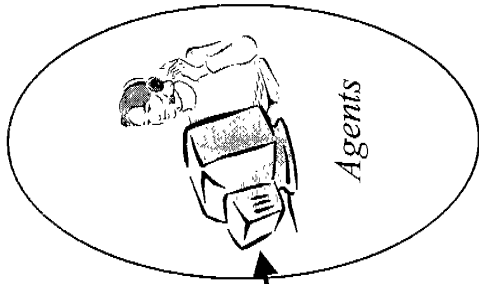
建議使用 Microsoft IE 5.0 以上版本  
 無法連線請重啟

080080090  
 03899978

密碼申請  
 Wap 申請  
 影音補給站  
 優惠門號申請  
 異動申請  
 特業申請  
 停話申請  
 狀態查詢  
 帳務查詢  
 PUK 查詢  
 障礙申告  
 涵蓋不良申告  
 抱怨申告  
 業務資訊  
 使用說明  
 網頁熱線

Internet

### Call Center





ChungHwa Telecom

# *Agenda*

- ◆ **Background**
- ◆ **Goal of CHT's Call Centers**
- ◆ **Basic Architecture**
- ◆ **Internet-based Electronic Commerce**
- ◆ **Summary**



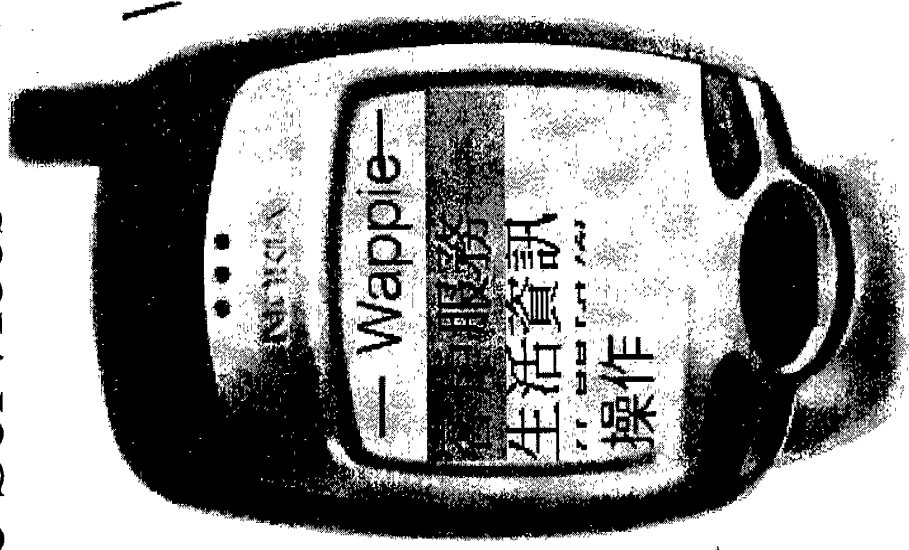


## *Mobile Commerce through Call Center*

ChungHwa Telecom

### **CHT Mobile Commerce Services**

- CHT's business Q&A
- Household Information :
  - News
  - Weather
  - Traffic Situation
  - Medicine
  - Entertainment...
- On-line Shopping :
  - logo and music ringtone download
  - mobile banking
  - mobile stock dealer
  - mobile ordering
  - mobile tourism...

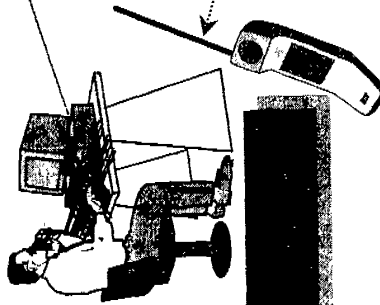
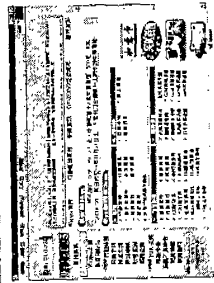




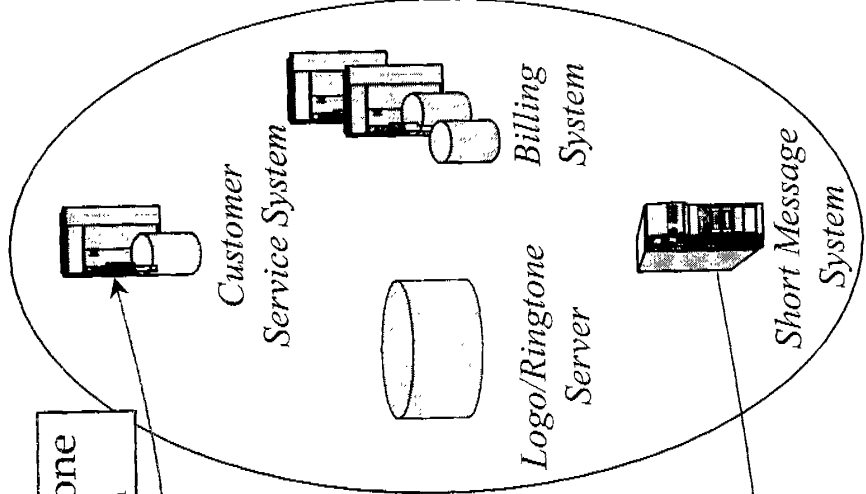
# Mobile Commerce through Call Center

ChungHwa Telecom

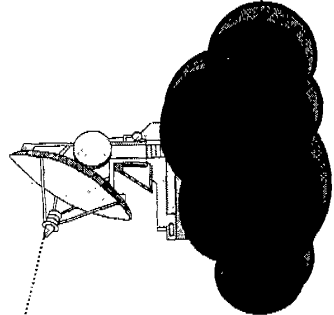
## Logo and Ringtone Download Service



Logo/Ringtone Selection



Logo/Ringtone Delivery







# Mobile Commerce through Call Center

ChungHwa Telecom

## Logo and Ringtone Download



MOTOROLA V8088/P7689可以下載鈴聲，快到3337影音補給站下...

### 服務內容：

哇~功能強大的鈴聲DIY上市囉!  
 超方便的編輯法讓你以輕鬆鬆鬆的就搞好一首  
 想要風格獨特的可愛圖圖，還可以到圖案DIY區  
 獨一無二的圖案喔!  
 一通只要2.5元，超值服務都在DIY特區!  
 不過，在使用之前，先提醒你，只有中華電信的  
 絕得要先申請帳號密碼!  
 還可以撥手機3337進入「影音補給站」使用語音



完成

Microsoft Internet Explorer

影音補給站 - Motorola V8088/P7689可以下載鈴聲，快到3337影音補給站下...

加入我的圖圖 (來電分組)

圖圖預覽

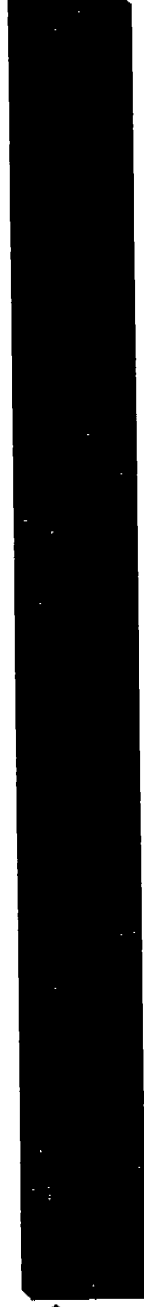
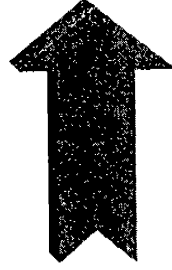
圖案代碼	圖案預覽	圖案名稱	人氣指數	立即下載
211010		非禮勿擾	448	
211009		牙齒痛痛	332	
211008		我在睡大頭腦	3488	
211007		唱歌的wapple	510	
211006		來運動吧	204	
211005		請打我屁屁	181	
211004		悠閒的wapple	55	
211003		來要買吧	118	
211002		Hello Wapple	365	
211001		我是wapple	104	

影音補給站



# *Agenda*

- ◆ Background
- ◆ Goal of CHT's Call Centers
- ◆ Basic Architecture
- ◆ Internet-based Electronic Commerce
- ◆ Mobile Commerce through Call Center





ChungHwa Telecom

# Summary

