

# Accessing Mainframe Applications with Wireless Devices



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# Agenda

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- **Wireless** ... the next great thing or a lot of hype?
- **Tools From Lightyear**
  - N3270E
  - IMS Client
  - CICS Client
- **Connection Options**
- **Next Steps**
- **Conclusions**

# Wireless ... the next great technology.

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CIO Today Magazine asked IT executives from Fortune 1000 companies for their thoughts on what would be **the next great technology to have a significant impact on the enterprise.**

- Linux
- Grid computing
- Offshore outsourcing
- Wireless

# Wireless is coming.

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Wireless applications are "going to creep to the top of the priority list, for the enterprise, for the IT department, and they'll make up **more than 85 percent of the new development effort** in the next three to five years."

Theresa Lanowitz, Gartner research director

# The Business Objectives

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Failure to support the needs of their mobile workers could cost a company a 20% decline in productivity.

Wireless technology can increase business productivity by as much as 30%.

(Gartner Group)

# We are Ready for Wireless

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## Evolving Business Requirements

- Increased expectations for an immediate response
- Competitive pressure to improve customer service
- Companies are marketing to a more distributed area

## Workers are More Mobile

- Over 60 million mobile workers in the US today
  - 7 million 'road warriors' travelling for business daily
  - More than 7 million full-time telecommuters
- (Gartner Group)

## Rapid Adoption of Mobile Devices

- The pace of adoption of mobile devices has surpassed all other technologies including PCs and the Internet

# Is Wireless Ready for Us?

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Several factors have slowed the integration of wireless technologies into the corporate IT environment;

Performance - network speed has been slow

Cost - cost of data transmission has been high

Coverage - many areas lacked coverage

Device Limitations - devices have been slow, limited display

Development Tools - lack of standards and tools

# Which Access Model?

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## Synchronization

- Never dealing with current data
- Storage limitations
- Extra effort to replicate the data
- Security exposure if device is lost or stolen

## Real-time Mainframe Access

- Tremendous value in existing legacy applications and data
- 2/3 of business data is on the mainframe
- Direct access to 3270 applications, CICS or IMS



# Typical Applications

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- Examples:
  - ▶ inventory lookup
  - ▶ status of equipment for field personnel
  - ▶ insurance agents (claims, quotes, customer info)
  - ▶ sales agents (quotes, inventory status, order info)
  - ▶ order systems
  - ▶ status lookup (customers, employees, parts, equipment, orders, records, production ...)
  - ▶ existing Cobol/CICS or Cobol/IMS applications with extensive data validation and cross correlations to other data systems

# A Closer Look at the Technology

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## 3 Solutions from Lightyear

N3270E

IMS Wireless Client

CICS Wireless Client

# N3270E Vs. IMS or CICS Client

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N3270E provides terminal emulation on the wireless device

- Simple

- Easy to implement

IMS and CICS Clients provide direct access

- Much more efficient access optimized for the wireless device

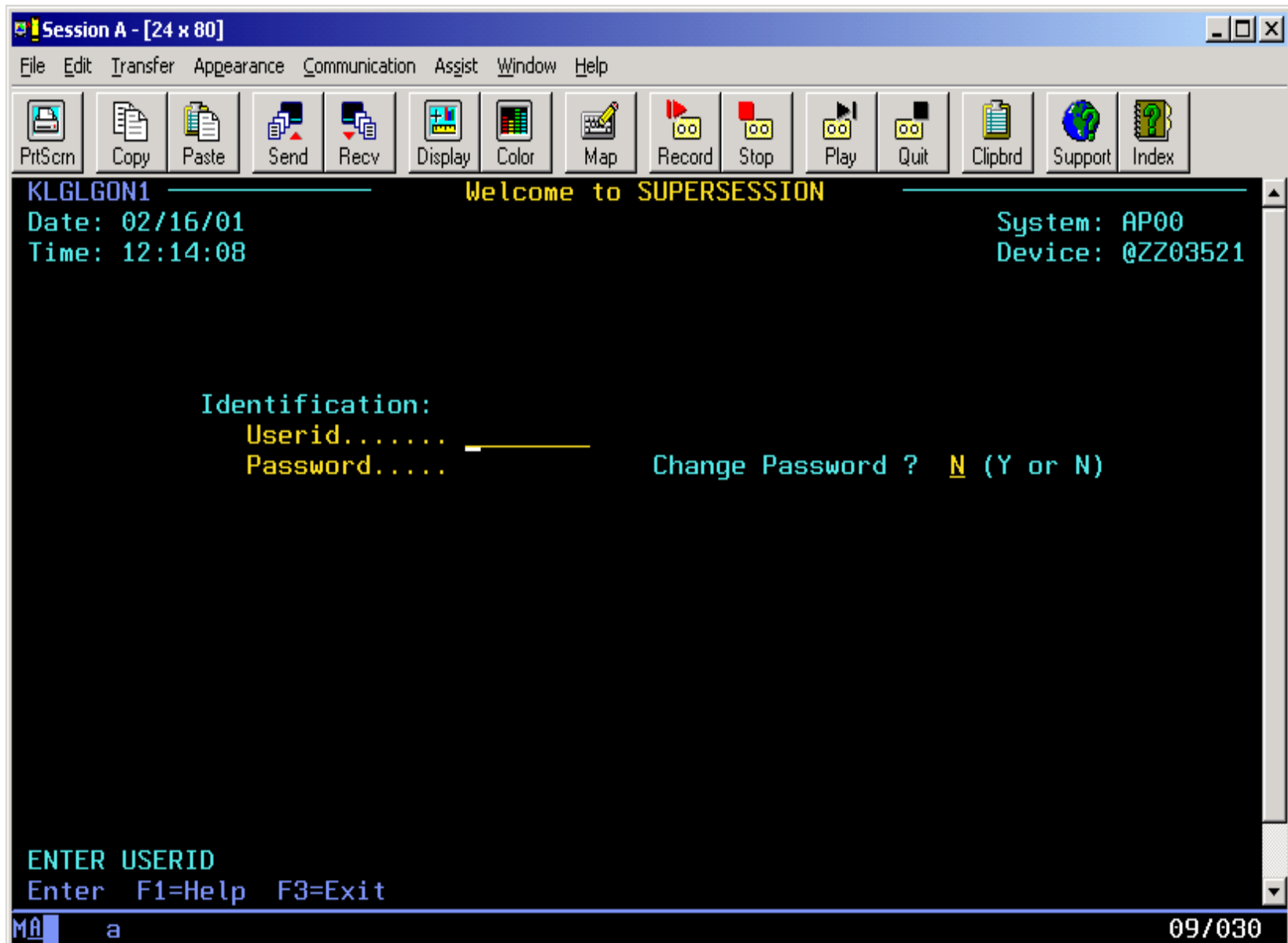
Lightyear's **Wireless Workbench** is a set of graphical mapping tools that allows you to create the wireless interface without programming

# N3270E for Palm

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- Accessing existing applications in a new way (Wireless)
  - ✓ Initially, for 3270 applications
    - to follow: 5250 and VT100 emulation
  - ✓ Keeps same look and feel
  - ✓ Client side solution
  - ✓ No customization - on either side
  - ✓ IF you want to access corporate data WITHOUT a re-write

# 3270 Screen on PC Em

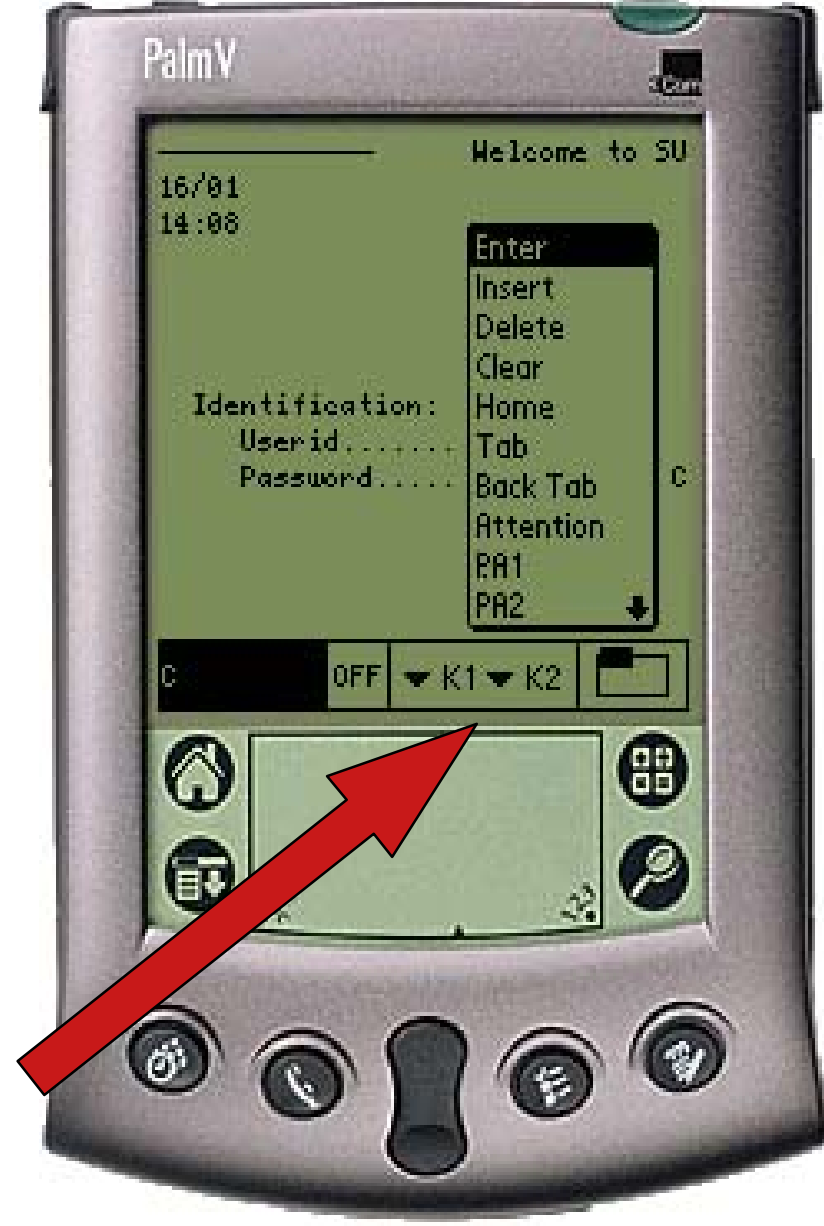
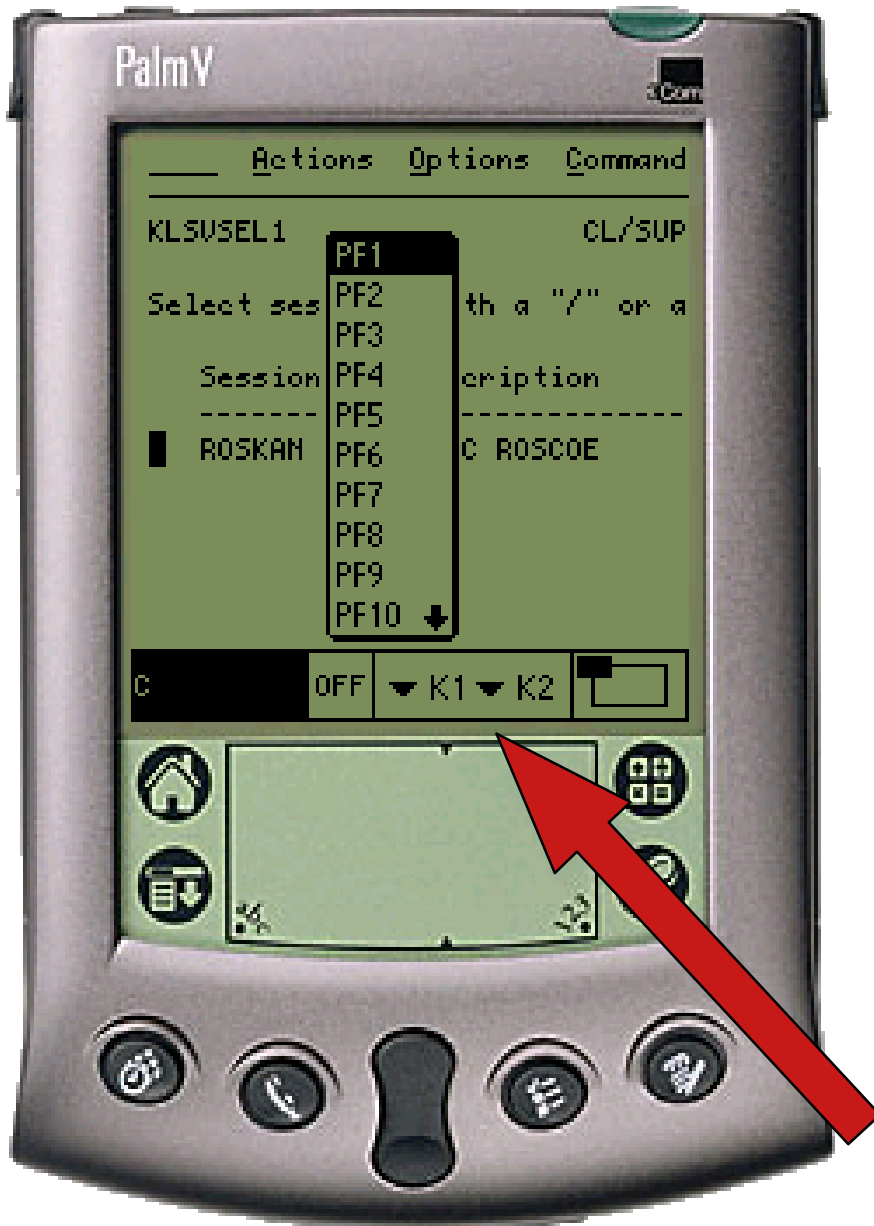


# 3270 Screen on Palm



Navigation  
Wizard

# 3270 Screen on Palm



**Function  
Keys**

# 3270 Screen on Palm

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# N3270E Features

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- ✓ Supports TCP/IP Telnet 3270E Protocol
- ✓ Supports Any Wireless IP Network
  - CDPD, Ricochet, Private Cellular Network
- ✓ Supports 3278/3279 Model 2 (24x80)
- ✓ Ease of Use
- ✓ Security
  - Conforms Standard Host Security (RACF,...)
  - Can Specify LU Name
  - Conforms Standard Encryption, VPN, SSL...  
(Requires 3rd party S/W)

# To the User

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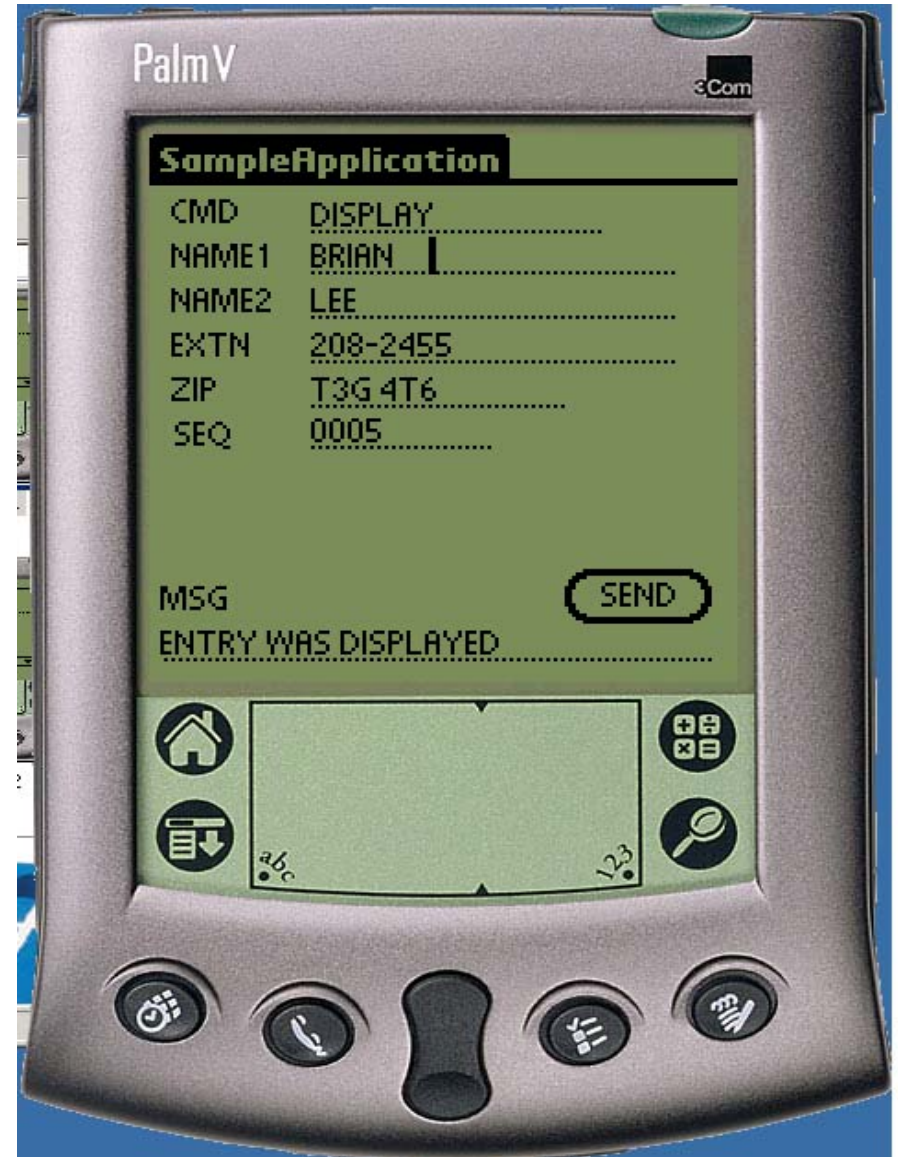
- ✓ Easily Installable with Hotsync
- ✓ Small Foot Print and Intuitive User Interface
- ✓ Same look and Feel of Original 3270 Screen
- ✓ Screen Navigation with Scrolling Icon
- ✓ Follows Standard User Interface of Palm
- ✓ No Need to Re-Program
- ✓ Re-Use Skill Sets on the PDA, Wireless

# IMS Client for Palm

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- ✓ Wireless connector to IMS Connect
- ✓ Initially, Palm Platform
  - ▶ to follow: Windows CE
- ✓ Program to Program communication
- ✓ Client side solution
- ✓ No customization or re-write on server side
- ✓ Redesign user interface and screen based on the features of specific handheld device
- ✓ Merge several transactions to one screen

# IMS IVP Screen for Palm



# IMS Features

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- ✓ Supports Any Wireless TCP/IP Network
  - ▶ CDPD, Ricochet, Private Cellular Network
- ✓ Supports IMS Connect Version 1.0 or above
- ✓ Programming Interface (API)
- ✓ Security
  - ▶ Conforms Standard Host Security (RACF,...)
  - ▶ Conforms Standard Encryption, VPN, SSL... (Requires 3rd party S/W)

# CICS Client for Palm

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- Wireless connector to CICS Transaction Gateway
- Initially, Palm Platform
  - ▶ to follow: Windows CE
- Program to Program communication
- Client side solution
- No customization or re-write on server side
- Redesign user interface and screen based on the features of specific handheld device
- Merge several transactions to one screen

# CICS Features

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- ✓ Supports Any Wireless TCP/IP Network
  - ▶ CDPD, Ricochet, Private Cellular Network
- ✓ Supports CICS Transaction Gateway Version 3.1 or above
- ✓ Programming Interface (API)
- ✓ Supports ECI interface only (Version 1)
- ✓ Security
  - ▶ Conforms Standard Host Security (RACF,...)
  - ▶ Conforms Standard Encryption, VPN, SSL... (Requires 3rd party S/W)

# Sample CICS Application

**CMS [Mainframe]** - □ ×

DTCO160 Contract Funding READ

Contract:   E Reference Doc:  Sfx:  Begin Date:

Status:  Proj Id:     -

Contractor:

FEIN:  -

Encumbrance Orig \$:  Unexpended \$:

Encumbrance Curr \$:

D.A. Coding

T/C	Reference Doc	Sfx	FUND	BFY	INDEX	PCA	Sub Obj
<input type="text" value="705"/>	<input type="text" value="C0981509"/>	<input type="text" value="01"/>	<input type="text" value="4100"/>	<input type="text" value="89"/>	<input type="text" value="6600"/>	<input type="text" value="99120"/>	<input type="text" value="2710"/>

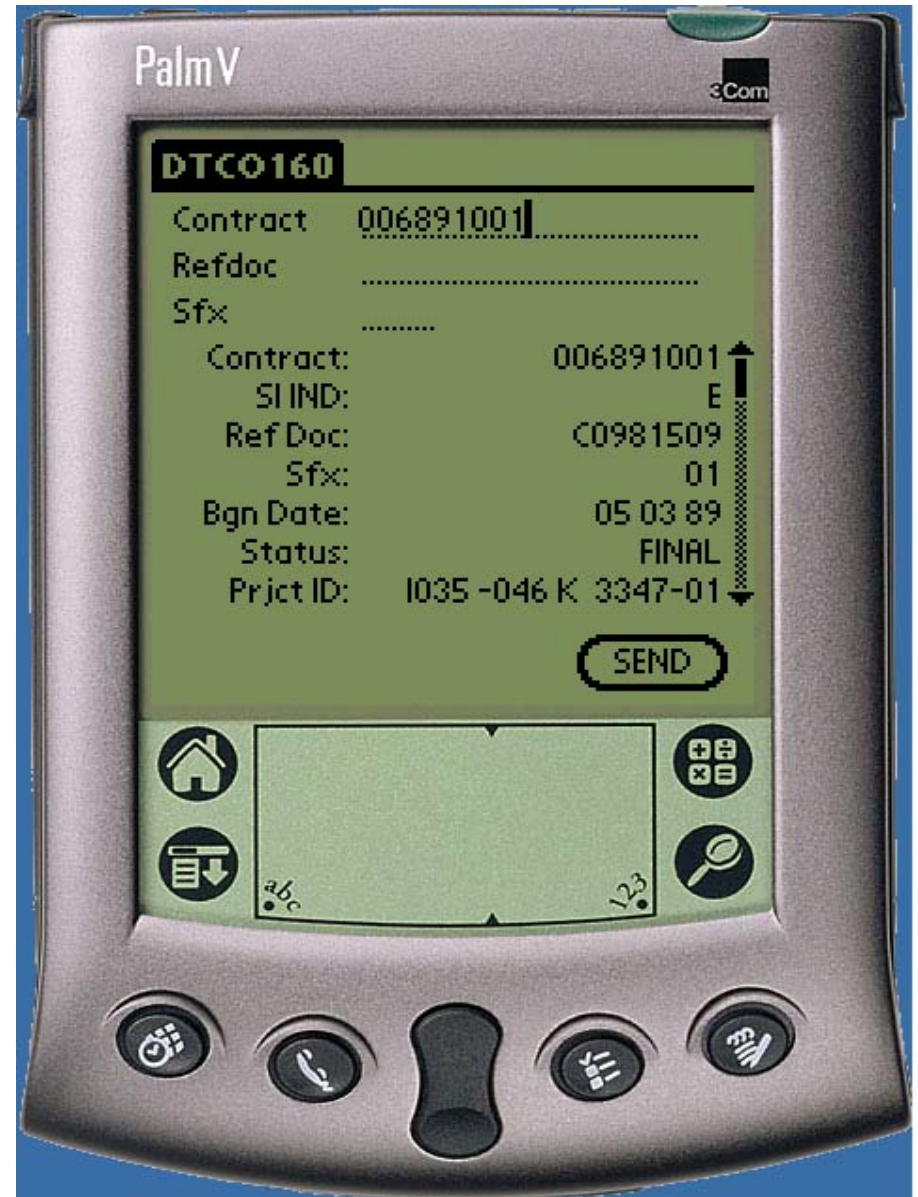
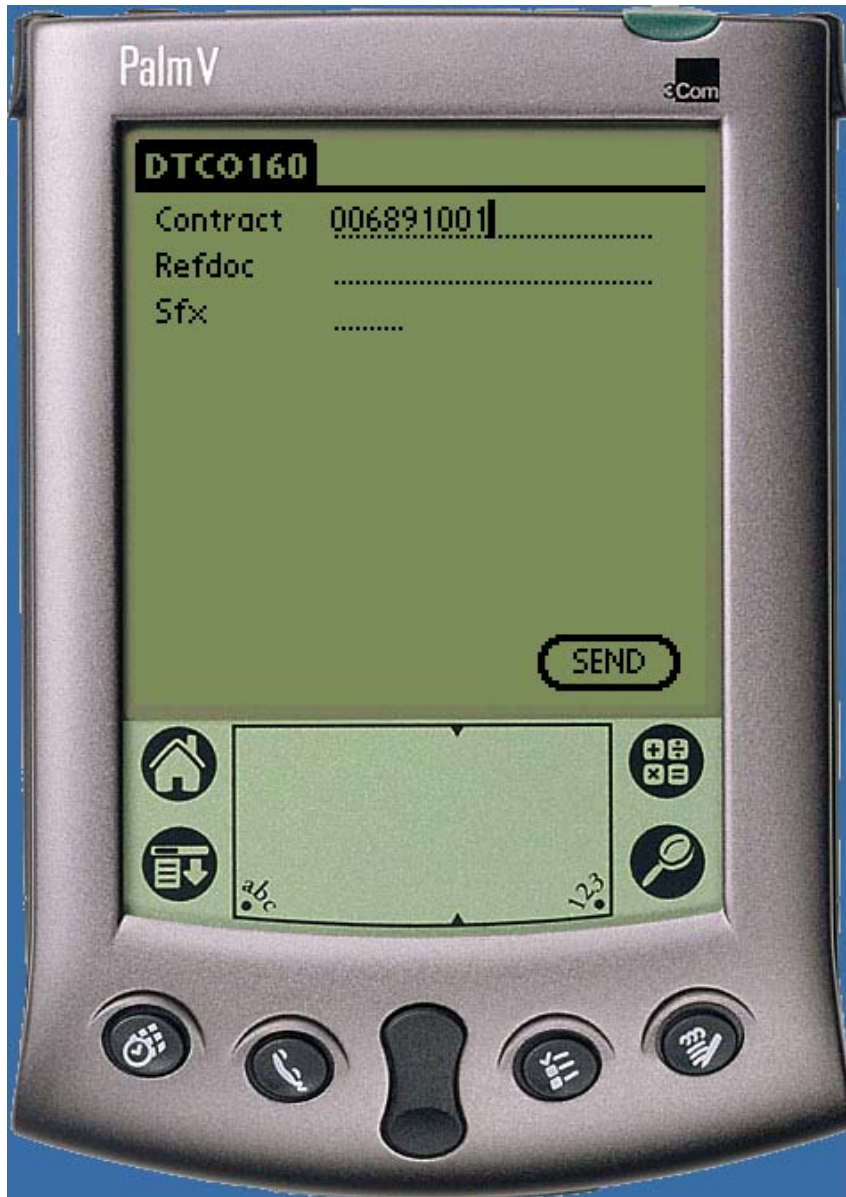
KDOT Coding

ORGANIZATION			PROJECT ID									
Dist	Bur/ Area	Ser No	Juris	No	Stage	Func Unit	Proj Activ	Task	INDX	PCA	KDOT ACCT	Object
<input type="text" value="01"/>	<input type="text" value="03"/>	<input type="text" value="000"/>	<input type="text" value="K"/>	<input type="text" value="3347"/>	<input type="text" value="01"/>	<input type="text" value="0"/>	<input type="text" value="380"/>	<input type="text" value=""/>	<input type="text" value="6600"/>	<input type="text" value="9912"/>	<input type="text" value="5473"/>	<input type="text" value="271.02"/>

**Error/Status**



# Sample CICS Application



# Configuration Options

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A closer look at the configuration options ...

# Palm Mobile Internet Kit

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IR  
Solutions



Cable  
Solutions



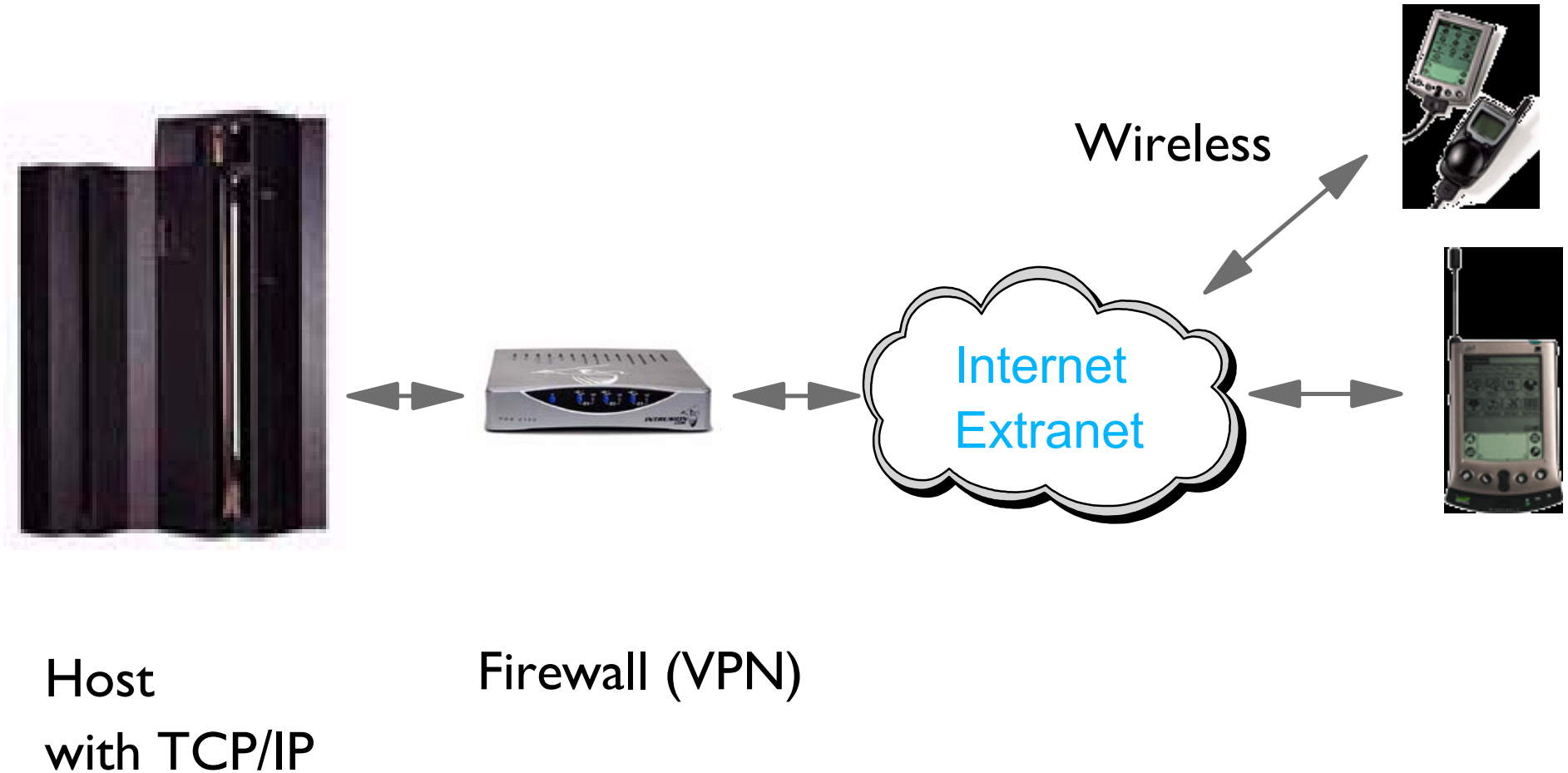
Modems



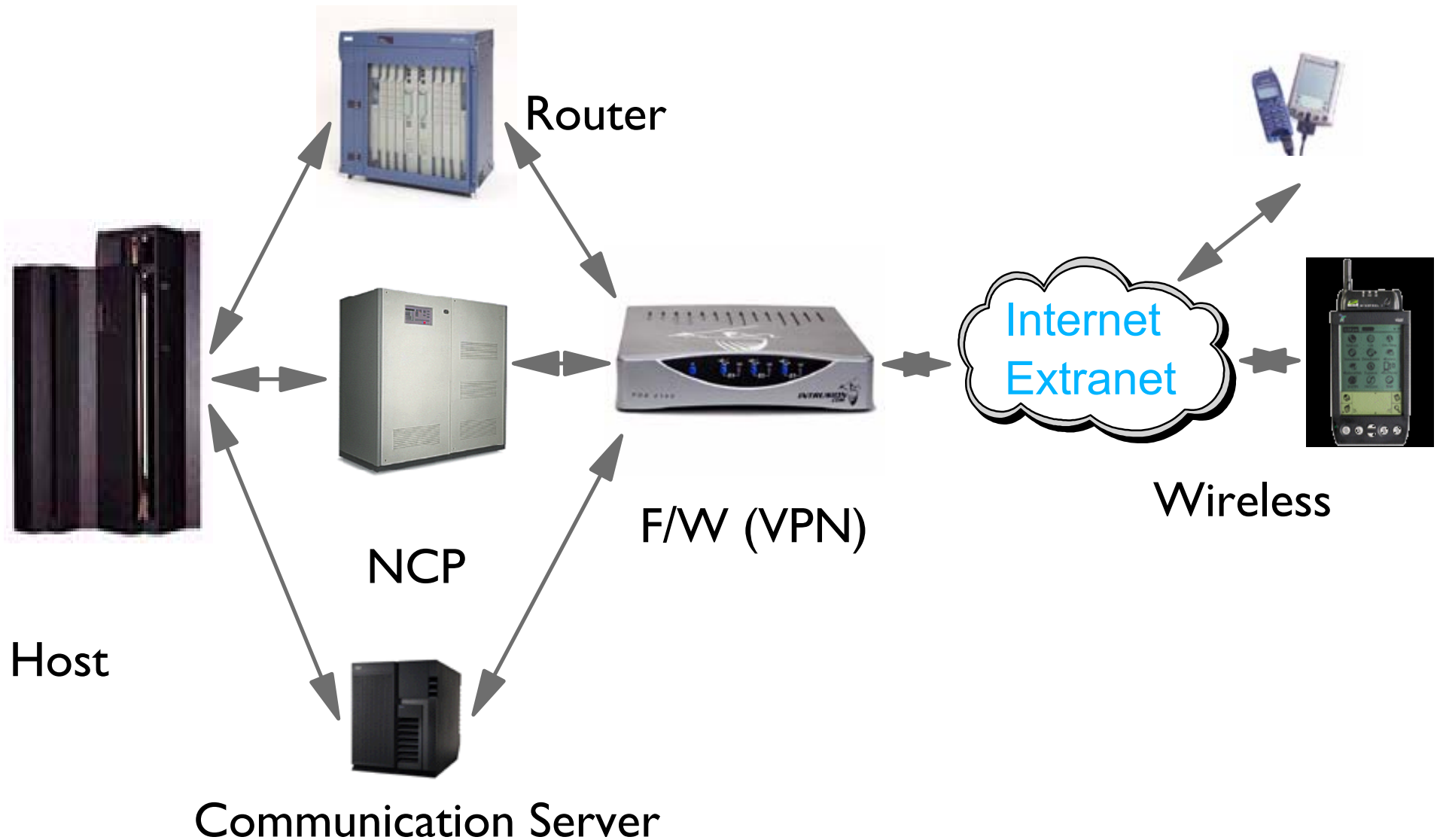
Wireless  
Modems



# Configurations (2 Tier)

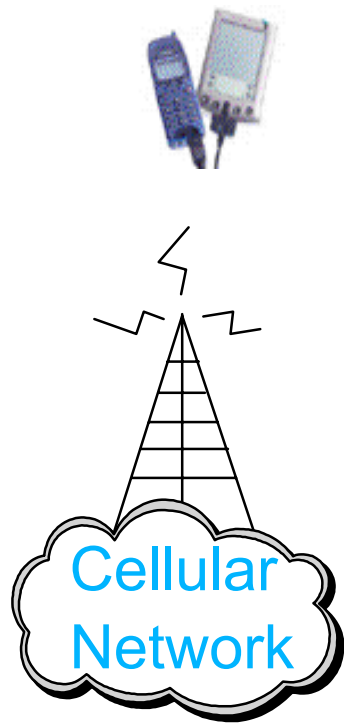


# Configurations (3 Tier)

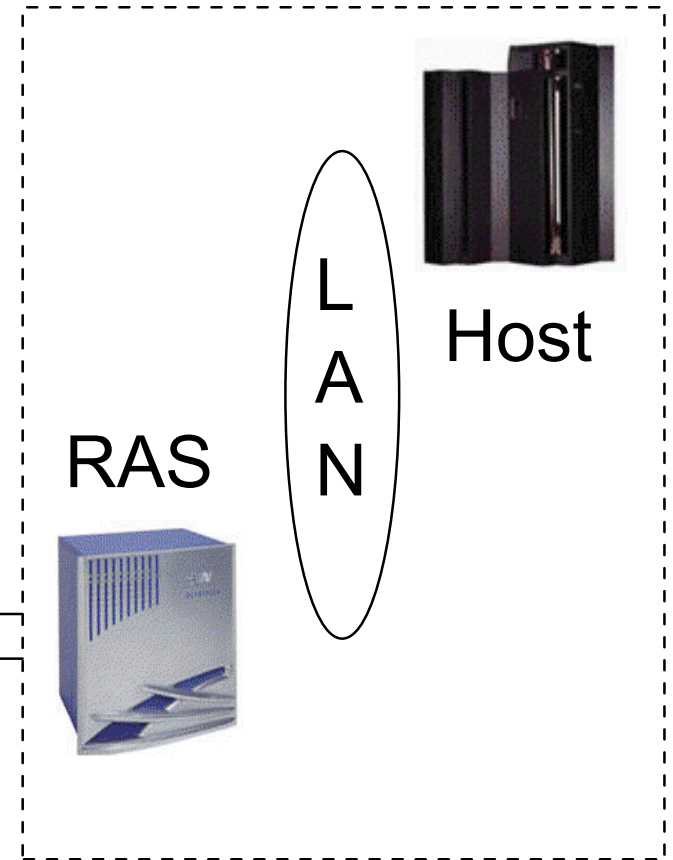


# Corporate LAN to Wireless WAN

## <Cellular>



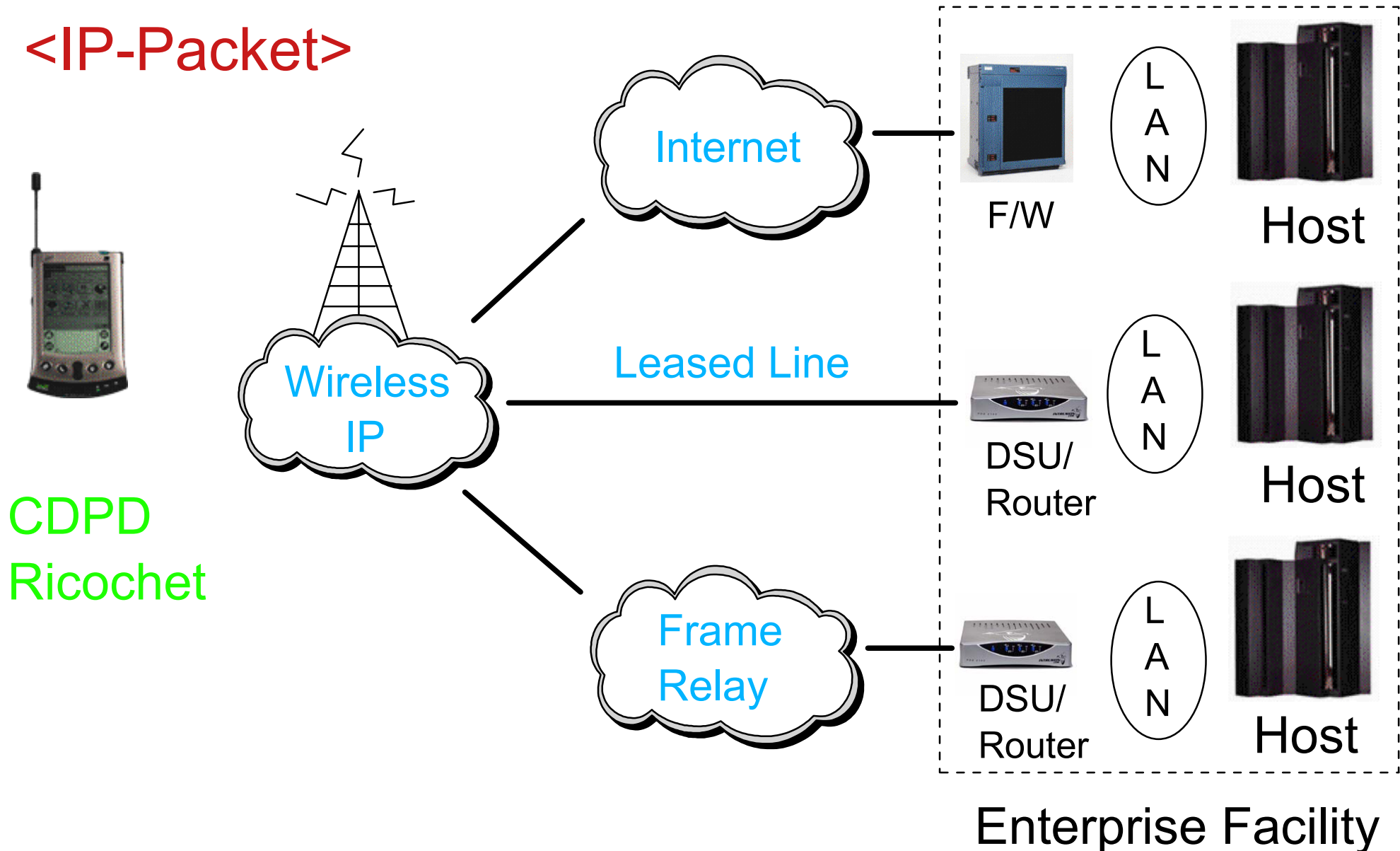
- E-mail
- Browser
- Custom Appl.
- PPP Connection



Enterprise Facility

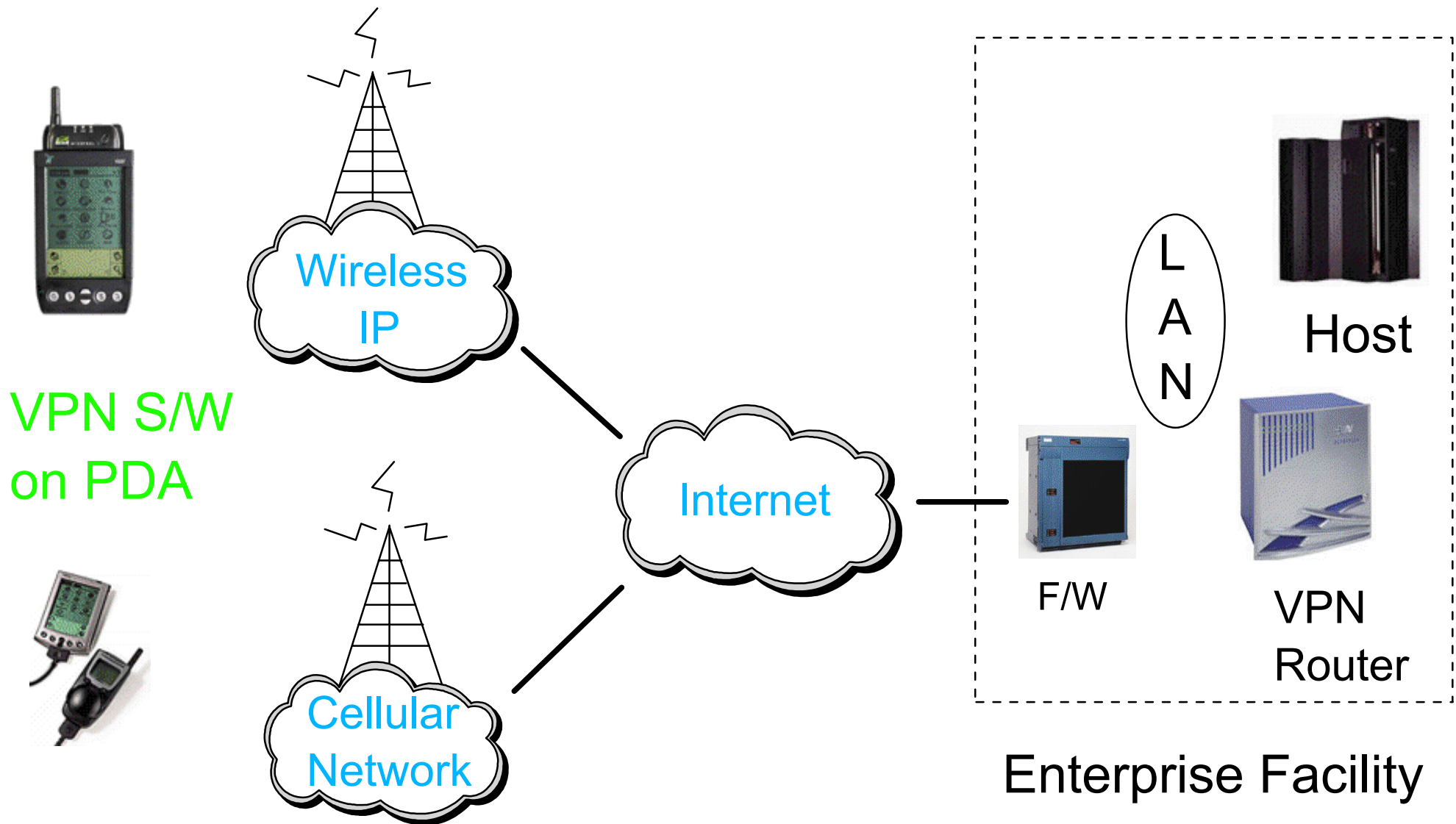
# Corporate LAN to Wireless WAN

<IP-Packet>





# VPN (Virtual Private Network)





# Prerequisites

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## ■ Hardware

- ▶ Host with TCP/IP Connection
- ▶ 100 KB of Free Memory in the Palm
- ▶ Palm with Wireless TCP/IP Connection
- ▶ Firewall with VPN Feature (Optional)

## ■ Software

- ▶ Telnet3270 or Enhanced Server : N3270E for Palm
- ▶ IMS Connect : IMS Client for Palm
- ▶ CTG : CICS Client for Palm
- ▶ Palm OS V.3.X or above
- ▶ VPN Client on Palm (Optional)

# Next Steps

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In their report *Untethering Your Business* the Yankee Group recommends a 2 phase plan;

Build momentum with a relatively low-cost point solution.

Start simple and address a single wireless application requirement

Construct a gateway that can be leveraged for multiple wireless/mobile initiatives.

Use a technology that will allow you to implement future wireless projects with minimal additional effort

# Pilot Projects

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Lightyear can help you implement a pilot project to evaluate wireless access to your mainframe data and applications.

You may be a candidate to participate in our beta program to evaluate and help set the direction for our wireless tools ... ask us how you can take part in this exciting opportunity.

# Conclusions

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- Wireless will have a major impact
- Start delivering existing applications in a new way - TODAY
- Not necessary to re-write applications
- Lightyear has the tools and experience to help you

