



**GEN 301**

# **Deploy VFP and SQL Server Data on your Handheld Device**

**Whil Hentzen  
Hentzenwerke Corp.**

**Visual FoxPro DevCon 2001**

# Who Am I?

- ◆ Hentzenwerke Corp. (17 yrs)
- ◆ Editor, FoxTalk
- ◆ Author (6 books)
- ◆ Publisher, The Essentials for Visual FoxPro
- ◆ Ask me about my kids

# **VFP/SQL Server Data on your Handheld – Why?**

- ◆ **How do you define yourself?**
- ◆ **In terms of data!**
- ◆ **The ultimate goal of computing – access to your data everywhere.**

# **Palm OS vs WinCE**

- ◆ **Market Share**
- ◆ **WinCE is a moving target**
- ◆ **Reliability**
- ◆ **Not a single platform**

# Available Tools

- ◆ Three paths to Palm development
- ◆ Amateur/shareware
- ◆ Hardcore/fulltime
- ◆ Middle ground

# Amateur/Shareware

- ◆ Good for simple/homebrew apps
- ◆ Inexpensive
- ◆ Easy to use
- ◆ Little/no documentation
- ◆ Structure limited to flat files/single files with lookups
- ◆ Limited UI

# Amateur/Shareware (cont.)

- ◆ Simple DB
- ◆ ThinkDB
- ◆ Jfile Pro

# Hardcore/Fulltime

- ◆ Down to the metal
- ◆ Completely flexible
- ◆ Significant resources required
- ◆ Requires C++
- ◆ CodeWarrior Environment
- ◆ KVM



# The Middle Ground

- ◆ For serious application developers who don't want to learn C++
- ◆ Robust environment for development and deployment
- ◆ Full-featured UI and multiple table capabilities
- ◆ Cost of tool pales besides investment of time

# The Middle Ground...

- ◆ Pendragon Forms
- ◆ Satellite Forms (“SatForms”)

# Pendragon Forms

- ◆ Full development environment
- ◆ Limited functionality
- ◆ Limited UI
- ◆ Database backend requires Microsoft Access

# Satellite Forms

- ◆ Professional IDE
- ◆ PUMA is a major player in wireless
- ◆ Consists of several pieces for the PC and the handheld
- ◆ \$795
- ◆ Support on website robust (if somewhat impersonal)

# Whatchu Want?

- ◆ Application running on desktop or server
- ◆ Download data to handheld
- ◆ Work with handheld in field for a while
- ◆ Back to desktop/server
- ◆ Synchronize changes on handheld and desktop/server simultaneously – and automatically during HotSync

# SatForms Components

- ◆ An IDE on the PC
- ◆ ActiveX control used in PC-based application that detects HotSync and runs your own code
- ◆ SDK
- ◆ RDK

# Overview of Development Process

- ◆ Install SatForms on PC
- ◆ ActiveX is automatically installed and registered, thus available to VFP
- ◆ Install SatForms SDK on handheld
- ◆ Develop handheld app in SatForms IDE on PC
- ◆ Develop desktop app in VFP on PC
- ◆ Deploy handheld app to handheld (via HotSync process)
- ◆ Deploy desktop app on PC or server

# Overview of Use

- ◆ PC application has data
- ◆ Place handheld in cradle and HotSync
- ◆ Use handheld in field
- ◆ Return handheld to cradle
- ◆ PC application (with ActiveX control) is running
- ◆ Initiate HotSync – data synchronized automatically



# What Happens Underneath

- ◆ **SatForms uses an intermediate data store on PC and a proprietary data source on handheld**
- ◆ **PC data moved to intermediate data store (still on PC) during first part of HotSync**
- ◆ **Intermediate data store moved to handheld proprietary data store during second part of HotSync**

# What Happens Underneath - II

- ◆ You run your VFP app – with the ActiveX control
- ◆ When you press HotSync on cradle, the ActiveX control detects the HotSync event and fires code you wrote to move data from VFP/SQL Server to intermediate data store
- ◆ The ActiveX control then moves the intermediate data store data to the handheld
- ◆ And vice versa

# The Palm Development Philosophy

- ◆ This ISN'T a “mini-pc” – it's a satellite companion to your PC! Thus...
- ◆ Minimalist approach
- ◆ Not data-entry intensive
- ◆ Not data storage intensive
- ◆ Not a robust UI
- ◆ Don't push the envelope – develop within its means (no 20,000 item list boxes!)

# The SatForms IDE

- ◆ Create tables
- ◆ Create form
- ◆ Map forms to tables
- ◆ Download form and tables to handheld

# The SatForms Table Editor

- ◆ Layout tab
- ◆ Edit tab
- ◆ Edit menu

# The SatForms Controls Palette

- ◆ Title
- ◆ Text
- ◆ Edit
- ◆ Paragraph
- ◆ Check box
- ◆ Radio button

# More SatForms Controls

- ◆ **Command button**
- ◆ **List box**
- ◆ **Droplist (combo box)**
- ◆ **Lookup**
- ◆ **Ink Control**
- ◆ **Bitmap**
- ◆ **Graffiti Shift Indicator**
- ◆ **Auto Stamp**
- ◆ **Custom Control**

# Form Properties

- ◆ Number of pages
- ◆ Linked table
- ◆ User permissions



# Control Properties

- ◆ Text, Edit, Paragraph, Check, Radio Button
- ◆ Listbox, Droplist, Lookup
- ◆ Buttons – Actions
- ◆ Buttons – Filters
- ◆ Buttons - Scripts

# Deploy and Run

- ◆ Download application to handheld
- ◆ Run application on handheld

# Desktop Application with VFP

- ◆ Create a form with ActiveX control
- ◆ Init the ActiveX control
- ◆ HotSyncStatus event in the ActiveX control

# Let's Do It!!!

- ◆ Demonstration

# Advanced Features

- ◆ Multiple forms
- ◆ Notes
- ◆ Script

# Testing (gasp!)

- ◆ POSE
- ◆ How it works
- ◆ Application

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