# Developing Software for the Hand-Held Computer

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# Overview

- Define Census Operations
- Census 2004 Test
  - Goals
  - High Level System Design
  - Hardware / Environment
  - Constraints
  - Development Environment
  - Lessons Learned

# Overview (cont.)

- Census 2006 Test
  - Goals
  - High Level System Design
  - Hardware / Enviroment
  - Constraints
  - Development Environment
  - Problems Incurred
  - 2004 vs. 2006

# Census Decennial Operations

- Nonresponse Followup (NRFU)
- Address Canvassing (AC)

# Census 2004 Test

- 1000 Enumerators
- 2 sites: 1 urban/1 rural
- NRFU started April 2004 and ended July 2004

# Census 2004 Test

Goals included:

- Automating the NRFU questionnaire in both English and Spanish
- Developing an Assignment Management System (AMS) to manage the enumerator workload
- Transmitting data to/from the device via a 56K modem

# Census 2004 Test

Goals included (cont.):

- Allowing the user to capture GPS coordinates
- Displaying TIGER map files using COTS product, ArcPad
- Encrypting Census data on the Hand-H Computer (HHC)

# 2004
# HHC Hardware / Environment

Compaq iPAQ 3950

- Pocket PC 2002 – OS
- 64 MB Memory
- 256 MB SD card
- Modem
- GPS
- Fsecure – encryption software
- ArcPad read-only Maps

# 2004 Constraints

- Screensize – 2” x 3”
- Lack of a physical keyboard
- No industry standard instrument development tools
- Available memory – 64MB
- CPU speed – 400 MHZ
- Development time – limited
- Training – must be simple
- OS – uses a ‘lite’ version of Windows

# 2004 Development Environment

- Visual Studio .NET
- C# Programming Language
- SQL Server CE
- XML

# 2004 Lessons Learned

- Pocket PC 2002 OS had known problems