

# SESRI Experience in Managing Field Laptops Deployment

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# Environmental Constraints

- Two or more types of laptops
- Laptops are out of the domain, so no central management control.
- Internet connection is not available at all time.
- Temporary Interviewers, need to create temp. accounts.
- Customized case assignment.

# Requirements

- Easy way to deploy questionnaire's components to target machines
  - DLL
  - Devices drivers
  - Database
  - Questionnaire script
- Executes some processes in the target machine.
  - Clean prior installations
  - Create accounts and groups
  - Assign Interviewer load.
  - Secure survey response data from being viewed, copied or modified.
    - Folder access right
    - No any local dataset viewer or reader.
  - Insure that you are building with the latest code, so fetch code from SVN and compile code when you are preparing the deployment package.

# Tales of two technologies

To accomplish the task(s) on hands, SESRI IT team uses two technologies

- Inno Setup, a free Installer for Window programs  
<http://www.jrsoftware.org/isinfo.php>
- Windows PowerShell, a task automation and configuration management framework.

# Inno Setup

- Packages components in a single executable file to be expanded at the target machine.
- Enable developers to do things; before creating the package, while installing the package and after completing installation.
- Can be extended using Pascal scripting

# Inno features

- Preprocessors and directives (compile time)
  - #define (variables such as Build number)
  - #exec (to build the any code)
  - Write to INI file in the developer machine.
- Constants
  - {app}
  - {win}
  - {pf} . . etc.
- Supports multi-language interface.

- Events
  - InitializeSetup
  - NextButtonClick
- Sections
  - [Files]
  - [RUN]
  - [CODE]
  - [ICONS]
  - [INSTALLDELETE]
  - [UNINSTALLDELETE]
  - [DIRS]
  - [REGISTRY]

# PowerShell

- Installed by default in Windows 7, Windows 8.
- Very expandable by using your own or third party modules.
- Very powerful.
- Exposes Windows Management Instrumentation (WMI) classes and harness their power into your script (Get-WmiObject).
- Exposes .NET framework classes



# The SESRI way

- Create our own module(s).
- Install Modules in a folder and add the location to \$env:PSModulePath
- One way to execute PowerShell script in the target machine is to launch it using VB script.
  - objShell = CreateObject("Wscript.Shell")
  - objShell.Run("powershell.exe -noexit " &"MyScript.ps1")

# Steps

- Update build number and date (pre-compile)
- Check files from SVN
- Compile code
- Package components
- Delete old installations
- Create necessary directories
- Stop any process that may cause problems to installation process
- Copy files to locations
- Execute powershell
  - Register DLL
  - Create account and groups
  - Control folder access
- Create desktop icon



# Survey Management System

Version number: 3 built on 05/03/2015



## Logging

login

Password

User Name

No	RespID	CaseID	Electricity Num	HHType	Status	Municipality



# Thank you

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