



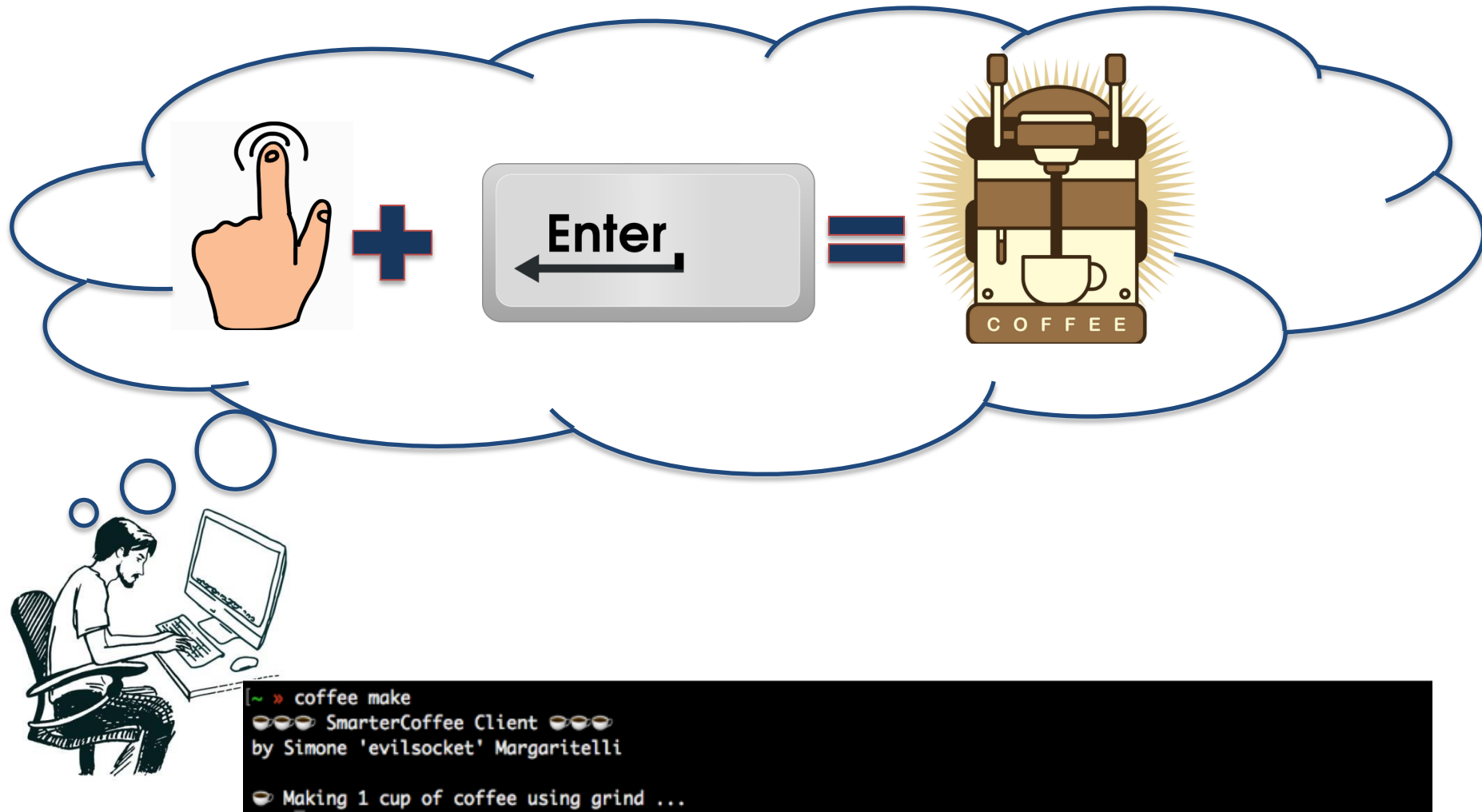
SM02

The “Unveiled” secret of “Windows Batch Scripting”

Laura Phelan, Cytel, Paris, France
Nicolas Rouillé, Geneva, Switzerland

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- Introduction
- Examples
- Ways to run scripts
- Conclusion



- What Is Windows Batch Scripting?

*“...a series of commands to be executed by the command-line interpreter [cmd.exe], stored in a plain text file. ...enables conditional branching and looping within the batch file....”**

- Why use them?

*“...batch files were added to ease the work required for certain regular tasks”**

*Source: Wikipedia

- I've never used batch script – where to start?



Script	Action
Echo	displays a message
Pause	Pauses the command
@echo off	To not output the command
FOR %%A IN (*) DO (	Example of a loop
set	create a variable, to resolve add %...%
%~d1%~p1	active folder
%date & %time	Today's date and time

```
phuse2 - Notepad
File Edit Format View Help
@ECHO off
ECHO I am tired of after running my programs I have to manually searching in my logs
ECHO have you tried batch scripting ?
PAUSE
```

Example – running in batch

```
if exist "%~d1%~p1\log" (set LogFolder=%~d1%~p1\log) else...  
if exist "%~d1%~p1\lst" (set LstFolder=%~d1%~p1\lst) else...
```

```
set /A NbProgsRan=0
```

```
FOR %%A IN (%*) DO (
```

```
set /A NbProgsRan+=1
```

```
ECHO '%%~nA%%~xA' Execution is ongoing
```

```
"D:\SAS94\SASHome\SASFoundation\9.4\sas.exe" -sysin  
"%~d1%~p1%%~nA%%~xA" -log "%LogFolder%\%%~nA.log" -print  
"%LstFolder%\%%~nA.lst" -icon -nosplash -rsasuser
```

Example – running in batch

```
set /A TotalNbOfLogERROR=0
set /A TotalNbOfLogWARNING=0
...
```

ECHO - Log scanning - messages displayed by criticality:

```
findstr /A:4F /n "ERROR fatal" "%LogFolder%\%%~nA.log"
findstr /A:2F /n "WARNING uninitialized unequal" ...
)
```

rem --- to compute the cumulative nb ERRORS/ WARNINGS

```
if exist "%LogFolder%\%%~nA.log" (
for /f "tokens=*" %%j in ('findstr "ERROR"
"%LogFolder%\%%~nA.log"') do @SET /A TotalNbOfLogERROR
+= 1 ...)
```



PROS

- ✓ Versatile
- ✓ 'Universal'
- ✓ Integrates other software
- ✓ Well documented
- ✓ File manipulation
- ✓ Automates routines



CONS

- ✗ Fear of replacement?
- ✗ Endangered species?
- ✗ PowerShell, VB, JavaScript - better structured?

■ Compare on the fly

The screenshot shows a Microsoft Word document titled "t-ae-over-v2.rtf_compared [Compatibility Mode] - Microsoft Word". The document contains a table titled "Table 14.3.1.1a: Overview of Adverse Events: Subjects with Events - Safety Analysis Set (from ADAE)". The table compares four treatment groups: Placebo (N=140), Trt1 20mg (N=98), Trt1 60mg (N=194), and Trt2 60mg (N=52). The table lists various adverse events and their frequencies and percentages for each group. A Windows Script Host dialog box is overlaid on the bottom right, displaying the message: "Comparison completed and saved as: X:\Biostats\Dev\Standard_TLFs_V01\Demo_Training\Biostatistics\Production\Tables\Output\Phuse_demos\t-ae-over-v2.rtf_compared.doc." The dialog box has an "OK" button.

	Placebo (N=140)	Trt1 20mg (N=98)	Trt1 60mg (N=194)	Trt2 60mg (N=52)
Number of TEAEs	111 (79.3)	76 (77.6)	159 (82.0)	4344 (84.6)
Number of Serious TEAEs	4 (2.9)	7 (7.1)	8 (4.1)	4 (7.7)
Number of TEAEs Leading to Withdrawal of Study Drug	5 (3.6)	5 (5.1)	7 (3.6)	1 (1.9)
Number of TEAEs Leading to Study Termination	2 (1.4)	1 (1.0)	3 (1.5)	0 (0.0)
Number of TEAEs by Worst Severity				
Mild	48 (34.3)	25 (25.5)	59 (30.4)	13 (25.0)
Moderate	54 (38.6)	41 (41.8)	88 (45.4)	26 (50.0)
Severe	9 (6.4)	10 (10.2)	1143 (6.2)	5 (9.6)
Life-threatening	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Death	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Number of TEAEs by Worst Relationship				
Unrelated				
Unlikely				
Possibly Related				
Probably Related				
Definitely Related				
Possibly, Probably or Definitely Related				

A TEAE is defined as an AE whose date of onset occurs after the date of the first dose of study drug and will follow protocol/SAP.

If a patient experienced more than 1 event in a given category, the event is counted as 1.

Output ID: t-ae-over 12OCT18 02:56 X:\BIOSTATS\DEV\STANDARD

Windows Script Host

Comparison completed and saved as:
X:\Biostats\Dev\Standard_TLFs_V01\Demo_Training\Biostatistics\Production\Tables\Output\Phuse_demos\t-ae-over-v2.rtf_compared.doc.

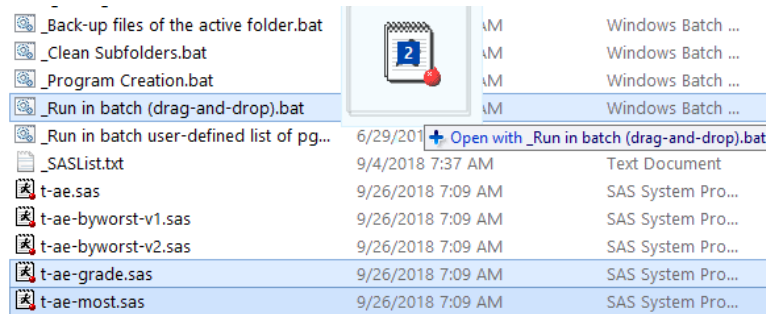
OK

Different ways to run scripts

- Command prompt

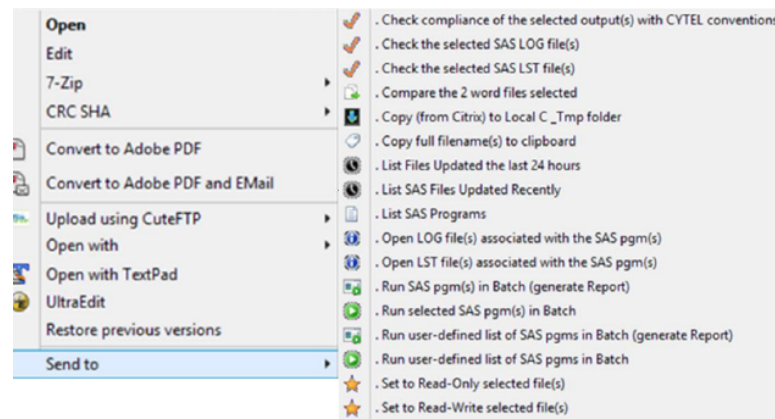
```
C:\_ Command Prompt
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.
C:\Users\laura.phelan>compare.vbs base.doc new.doc
```

- Drag-and-drop



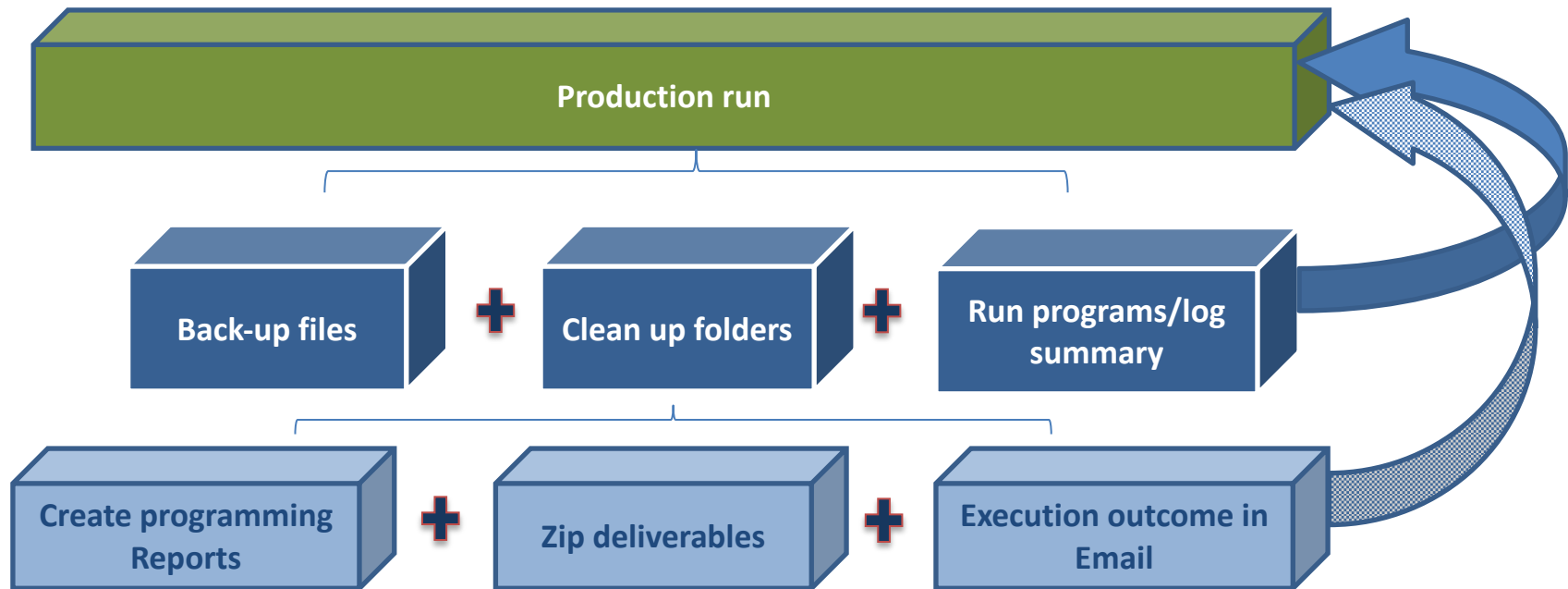
- Other software, e.g. SAS, text editors

- «Send to»



- Identify routine tasks
- Select appropriate language
- Brick by brick
- User-friendliness
- Optimize integration, minimal coding





Nicolas Rouille

Email: Nicolas.Rouille@cytel.com

Laura Phelan

Email: Laura.Phelan@cytel.com

Web: www.Cytel.com

- run several SAS programs at once
- summarize log errors/warnings
- create backups
- run P21[®]
- create standard program & header