Spreadsheet Poker Add-In version 1.8
October 10, 2009

1 Introduction
The “Spreadsheet Poker” is a set of Visual Basic macros that automates the modification of one spreadsheet based on a set of instructions in another spreadsheet. The key benefits of the Poker are to

- Avoid making manual changes to the target spreadsheet, which can be difficult to track and to communicate to others.
- Fully document the set of changes applied to the target spreadsheet.
- Reduce the work required to apply the set of changes to updated versions of the target spreadsheet.

Although for our purposes, the target spreadsheet is assumed to be a version of GREET, the Poker facility is general and can be used in other contexts.

2 The Spreadsheet_Poker Add-In
The Poker is delivered as an Excel Add-In. This makes the macros available to all spreadsheets, without requiring the macros to be embedded in multiple spreadsheets, which would present a maintenance challenge. As a separate Add-In, updates to the Poker can be distributed without affecting existing Poker-based workbooks.

The Poker has been tested with Office 2007 under Vista, and with Excel:Mac 2004, the only two Excel environments I have available for testing.

2.1 Installing the Spreadsheet_Poker Add-In
Copy the file Spreadsheet_Poker.xla to a convenient location and use the Add-Ins manager to browse to the file. In Office 2007, click on the Office menu (round button with Office icon in the upper left corner), then Excel Options -> Add-Ins -> Manage. The Manage button is at the bottom of the Add-Ins panel.

A user-friendly installer will be developed for this if the budget permits.

3 Poker Data
To use the Spreadsheet_Poker Add-In, simply create a workbook with a sheet named “Settings” that is structured as follows. A sample Settings sheet is shown in Figure 1.

- Cell B1 contains the name of the target workbook, i.e., the workbook that is to be updated according using the data provided.
- Row 2 contains column headings (just for usability – not used by the Poker macro)
- Starting in Row 3 are rows of Poker instructions of the following form:
Column A: Target sheet name. If not target sheet name is specified, the previously set value is used.

Column B: Target cell coordinates or cell name. The coordinates can identify a range of cells.

Column C: Value or range of cells to copy to the target range. If column B identified a range (more than one cell) then column C must identify a source range, e.g., “B231:C234” that is the shape (number of rows and columns) as the source range. Note that a cell formula can be inserted in the target cell by specifying in the value cell a formula prefixed with a single quote, e.g., ‘=sum(A1:B2)

Column D: The “Skip” column. If a value of 1 is found here, the instruction row is skipped; otherwise, the instruction is applied.

Column E: The value that appears in GREET by default. This is used by the CheckDefaults macro to identify values that are different in the target spreadsheet than assumed in the “poker” workbook. This can be used when migrating to a new version of GREET to help identify cells that have changed location or default value.

Other columns are unused by the Poker. It is recommended that a column be dedicated to notes about the value being set.

- The Spreadsheet_Poker reads instruction rows until encountering a row with no value in column C.
- Rows after the first blank row can be used for ancillary calculations; these are ignored by the Poker.

Figure 1. Sample Settings sheet.

<table>
<thead>
<tr>
<th>Target Workbook:</th>
<th>Poker_v23.xls</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target Worksheet</strong></td>
<td><strong>Cell or Range</strong></td>
<td><strong>Value or Source Range</strong></td>
<td><strong>Skip</strong></td>
</tr>
<tr>
<td>Scratch</td>
<td>A1</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>A2</td>
<td>40</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>A2</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>Scratch</td>
<td>B1</td>
<td>‘wonderful’</td>
<td>0</td>
</tr>
<tr>
<td>Scratch</td>
<td>A1</td>
<td>1234e5</td>
<td>0</td>
</tr>
<tr>
<td>Scratch</td>
<td>A3</td>
<td>‘=sum(A1:A2)’</td>
<td>0</td>
</tr>
<tr>
<td>Foobar</td>
<td>1234</td>
<td>0</td>
<td>1234</td>
</tr>
</tbody>
</table>

4 Calling the Spreadsheet_Poker

The Spreadsheet_Poker Add-In defines four public functions intended to be called from a Poker data file. These functions take no parameters and can be attached to a button for convenience.
• **PokeCells** – Copies the data from the Settings sheet to the target workbook. Does not perform any GREET-specific actions. This macro is intended for general-purpose use.

• **GreetCalculate** – Forces GREET to recalculate, including toggling to (or from) the Fuel_Prod_TS sheet to cause the macros there to run. These macros are required to run if data on the Fuel_Prod_TS sheet has been modified.

• **GreetPokeCells** – Calls PokeCells, then calls GreetCalculate. This is the primary method to be invoked from GREET-based applications.

• **CheckDefaults** – Compares each default value to the value in the corresponding cell location in GREET and reports differences in the “Immediate” window in the Visual Basic environment.

The macros turn off screen updating to avoid flashing back and forth between workbooks.