#1131: Speedup text type response extraction by using tcl script

Product: HyperStudy
Product Version: Any
Computer Operating System: Any

Topic Objective
When users need an extraction response from a large ascii file in HyperStudy, it usually takes a long time. By using tcl script with regular expression to extract response strings into another ascii file, the user can speed up Hyperstudy ascii type response extraction.

Background
Using HyperStudy to extract a response from a large ascii file directly is very time consuming. The user can register tcl as a HyperStudy solver and use a tcl script to launch the real solver, and extract needed strings to another ascii file using regular expression after the original file, which contain necessary response strings. HyperStudy will then read the response from the new ascii file, which is always smaller.

Step by Step Procedure
1. Write a tcl script as followed, and save as C:\temp\extract_response_to_a_new_file_for_hst.tcl:

```
global filename
global newfilename
global keyword
set filename "crank.out"
set newfilename "crank-2.out"
set keyword {Subcase     Compliance}
exec "C:/Altair/13.0/hwsolvers/scripts/optistruct.bat" crank.fem
proc extract_resp {} {
        global filename
        global newfilename
        global keyword
        set Lnum 2
        set chan_r [open $filename r]
        set chan_w [open $newfilename a+]
        while {![eof $chan_r]} {
                gets $chan_r line
                if {![regexp $keyword $line]} {
                        continue
                } else {
                        for {set i 1} {$i<=$Lnum} {incr i} {
                                puts $chan_w $line
                                gets $chan_r line
                        }
                }
        }
        flush $chan_w
```

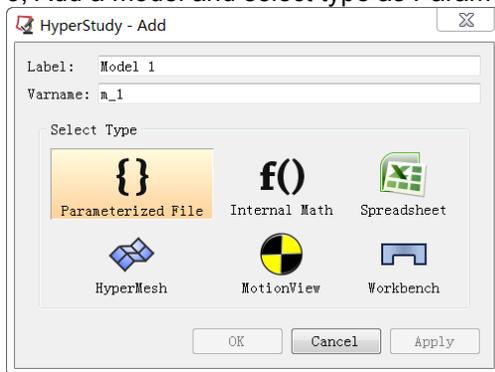```
        close $chan_w
        close $chan_r
}

if {[file exist $filename]==1} {
        set atime1 [file atime $filename]
        after 1000
        set atime2 [file atime $filename]
        if {$atime1 eq $atime2} {
                extract_resp
        }
} else {
        after 1000
}
```
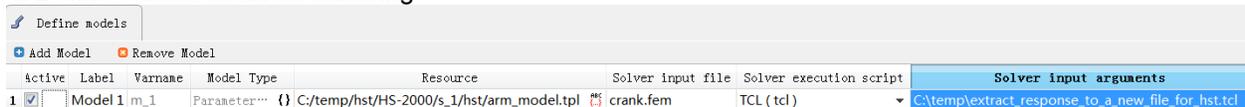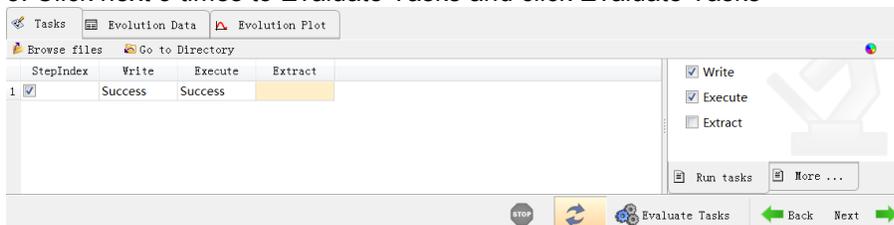
2. Start HyperStudy

3, Add a model and select type as Parameterized File



4. Define submit detail as following



5. Click next 3 times to Evaluate Tasks and click Evaluate Tasks



6, A new ascii file named crank-2.out was generated under folder
C:\temp\hst\HS-2000\s_1\approaches\nom_1\run__00001\m_1 with necessary response strings as
follow:

```
Subcase    Compliance
      1   2.662723E+04
```

7, Use HyperStudy to continue to extract response from crank-2.out ,which is much quicker.