TWEBUPDATE DEVELOPERS GUIDE

March 2005

Table of contents

TWebUpdate availability

WebUpdate is available as VCL component for Win32 application development.

VCL versions:
TWebUpdate is available for Borland™ Delphi 5, 6, 7, 2005 and Borland™ C++Builder 5, 6

TWebUpdate use

The TMS TWebUpdate component is designed to make distribution of application updates easier. TWebUpdate can handle network file transfer, FTP or HTTP based distribution methods. Formats for distributing updates can be LZ compressed files, CAB files, patch difference files and normal files. The application updates can consist of one or multiple executable files as well as other application related data files. A high degree of customization is possible in the setup of the update process. For easy of use, a WebUpdate Wizard is included as well as an UpdateBuilder that creates update process control files.

TWebUpdate organisation

The application update process happens in several steps. Step 1 is obtaining the control file (.INF file) from a network, FTP or HTTP based location. The next step is the processing of the .INF file by verifying new files, new actions, new versions and if necessary downloading the files. Update files that are not part of the executable running process (.EXE, .DLL's) can be immediately extracted to the proper location. If necessary, in the last step, the application is closed, the new EXE and/or DLL files are extracted and the application new version is automatically restarted.
This update process can run automatically or steered programmatically through the TWebUpdate component. As an alternative, the TWebUpdateWizard can be used that is a user-friendly front-end for guiding the user through the update process.
For internet based updates, TWebUpdate is based on the Microsoft WinInet API, available in Win 95 OSRB, Win 98, Win 98SE, Win ME, Windows 2000, Windows XP and Windows 2003.

TWebUpdate setup and methods

Setting the update distribution type

The main selection for TWebUpdate is the distribution method: network, FTP or HTTP based. This is set with the property TWebUpdate.UpdateType : httpUpdate, ftpUpdate, fileUpdate.

In case of FTP and HTTP update distributions, an Internet connection is required. For machines connecting through dial-up, TWebUpdate can automatically try to establish an internet connection. This is controlled by TWebUpdate.UpdateConnect. Various scenarios are possible: not trying to connect, try to connect with prompt, try to silently connect and try to establish a connection with and without automatic hangup.

TWebUpdate can prompt for each file to download, prompt once for first file or download all files silently. The TWebUpdate.UpdateUpdate property controls this.

Setting the update distribution location for network file based updates

For network file based updates, this is set with the URL property, ie:

\\networkserver\sharename\controlfile.inf

Setting the update distribution location for HTTP based updates

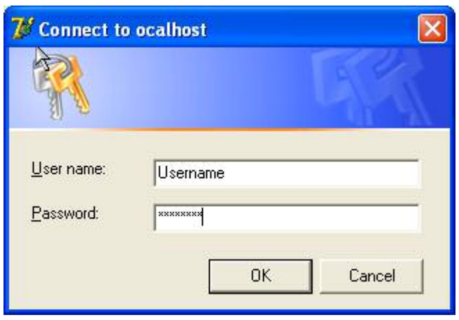
For HTTP based updates, this is also set with the URL property, ie:

http://www.myserver.com/myupdatefolder/controlfile.inf

Note that no proxy information should be set by default. TWebUpdate uses by default the proxy information as setup in Internet Explorer. If the update is located on a password protected website, the username and password must be set with:

UserID: website login username
Password: website login password

If username & password cannot be set to a fixed value, TWebUpdate can prompt for this. Setting TWebUpdate.Authentication to waAlways will cause the TWebUpdate to prompt for username and password. If TWebUpdate.Authentication is set to waAuto, TWebUpdate will only prompt if it finds a password protected website.



Two additional options HTTPKeepAliveAuthentication and ProxyUserID, ProxyUserPassword can be set when required.

Setting the update distribution location for FTP based updates

For FTP based updates, the update control file name is set with the URL property but in addition, the FTP server specifications and login details must be set with:

Host: sets the FTP server name
Port: sets the FTP server port
UserID: FTP login username
Password: FTP login password
FTPDirectory: folder on FTP server where update is located
FTPPassive: true when PASV FTP mode needs to be used

Controlling the update process

Once TWebUpdate is setup for the correct update distribution type, several methods and events are available for starting and controlling the update process.
The full update process is started by

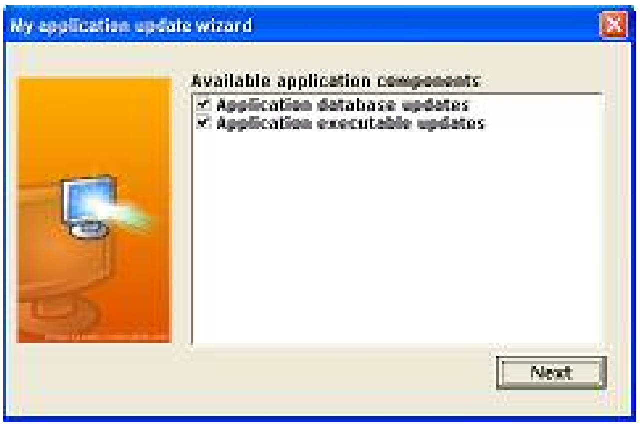
TWebUpdate.DoUpdate; (this performs the update in the main application thread)
or
TWebUpdate.DoThreadUpdate; (this performs the update in a separate thread)

If only a check is required if a new version is available, this can be done with the function:

TWebUpdate.NewVersionAvailable: Boolean;

Using the TWebUpdateWizard

The TWebUpdateWizard provides a user-friendly front-end to guide the user through the update process. To use the TWebUpdateWizard, drop the component on the form, connect the TWebUpdate component to its WebUpdate property and if required, connect a TWebUpdateWizardLanguage component to its language property. Start the wizard by calling TWebUpdateWizard.Execute;


My application update wizard
Available application components
Application database updates
Application executable updates
Next

Events during the update process

During the update process, various events are triggered that can be used to steer and monitor the update.

OnBeforeFileDownload(Sender: TObject; FileIdx: Integer; FileDescription: String; var URL: String);

Event triggered before a file is downloaded. The event returns the URL of the file and allows that the URL is dynamically changed through this event. FileIdx is the index of the file to be downloaded, FileDescription is the description found in the update control file. URL is the location found in the control file and can be dynamically changed.

OnFileNameFromURL(Sender: TObject; URL: String; var FName: String);

Event triggered to allow dynamically changing a download filename to another filename. If the URL would be http://www.myserver.com/myfile.cab, the download will automatically be named myfile.cab. My using the OnFileNameFromURL event, this can be dynamically renamed to another filename.

OnFileProgress(Sender: TObject; FileName: String;   Pos, Size: Integer);

Event triggered for file download progress indication. Pos holds the position of the download in a file of size set by the Size parameter.

OnFileDownloaded(Sender: TObject;   FileName: String);

Event triggered when a file has finished downloading.

OnFileVersionCheck(Sender: TObject; NewVersion, LocalVersion: String; var IsNew: Boolean);

Event triggered for custom version checking for each available file in the update. NewVersion holds the new version information and LocalVersion the reference (in most cases FileName) from where the local version information can be extracted. The IsNew parameter indicates whether the update is a newer version or not.

OnProgress(Sender: TObject; Action: String);

Event triggered for each step during the web update. Action indicates what is happening.

OnProgressCancel(Sender: TObject; var Cancel: Boolean);

Event triggered during update to allow cancelling updates while busy. By setting the Cancel parameter to true, the update process is stopped.

OnStatus(Sender: TObject; StatusStr: String;   StatusCode, ErrCode: Integer);

Event for status messages during web update. StatusStr shows the status as text, StatusCode returns the reference number of the status and ErrCode returns the type of the error (if an error happened)

Following constants are defined for this:

Constants used for status	Constants for errors
`WebUpdateSuccess         = 0;`	`ErrControlFileNotFound  = 0;`
`WebUpdateAccessError     = 1;`	`ErrUpdateFileNotFound   = 1;`
`WebUpdateNotFound        = 2;`	`ErrUpdateFileZeroLen    = 2;`
`WebUpdateInformation     = 3;`	`ErrUpdateTargetEqual    = 3;`
`WebUpdateNoNewVersion    = 4;`	`ErrUpdateSignatureError = 4;`
`WebUpdateNewVersion      = 5;`	`ErrConnectError         = 5;`
`WebUpdateHTTPStatus      = 6;`	`ErrUndefined            = $FF;`
`WebUpdateHTMLDialog      = 7;`	
`WebUpdateCABError        = 8;`	
`WebUpdateSpawnFail       = 9;`	
`WebUpdateWrongSource     = 10;`	
`WebUpdateSignatureError = 11;`	
`WebUpdateWhatsNew        = 12;`	
`WebUpdateEUL             = 13;`	
`WebUpdateWhatsnewCancel = 14;`	
`WebUpdateEULACancel      = 15;`	
`WebUpdatePostConnectFail= 16;`	
`WebUpdatePostPostFail    = 17;`	
`WebUpdateExecAndWait     = 18;`	
`WebUpdateUndefined       = $FF;`	

OnThreadUpdateDone(Sender: TObject);

Event triggered when the threaded update process is finished

OnAppRestart(Sender: TObject; var Allow: Boolean);

Event triggered before restarting the downloaded new version. Set Allow to false, if restarting the application is not allowed.

OnAppDoClose(Sender: TObject);

Event triggered to allow the application to execute its own close method, otherwise, TWebUpdate will force an application close itself. Note that when OnAppDoClose is assigned and the application is not closed from this event, the update will not automatically restart.

OnCustomValidate(Sender: TObject; Msg, Param: String; var Allow: Boolean);

Event triggered for custom validation of parameters from the update control file. This can be used for example for custom licensing control and disallowing updates to happen for products where the free update period has expired. This event is only triggered when custom validation information is available in the control file.

OnCustomProcess(Sender: TObject; Msg, Param: String);

Event triggered when custom update processing info is present in the control file.

OnGetFileList(Sender: TObject; List: TStringList);

Event triggered to allow user to select from multiple updated application components. The list contains the descriptions of the application components available. By removing descriptions from the list, the corresponding files will not be downloaded in the update process.

OnConvertPrefix(Sender: TObject; var Path: String);

Event triggered to allow user to convert directory prefixes into directory on the system. A directory prefix is the use of {PREFIX} in file paths where PREFIX is dynamically replaced by machine dependent paths. Default supported prefixes are

{WIN} : Windows folder
{PF} : Program Files folder
{TMP} : Temporary files folder
{APP} : Application folder

To support additional prefixes, the OnConvertPrefix event can be used.

OnDownloadedEULA(Sender: TObject; Text: TStrings; var Res: Integer);

Event triggered when EULA file found to allow customizing of display of EULA. The EULA is returned in Text and the result of accepting or not accepting the EULA is set in Res. Setting Res to mrOK accepts the EULA.

OnDownloadedWhatsNew(Sender: TObject; Text: TStrings; var Res: Integer);

Event triggered when What's New file found to allow customizing of display of What's New file. Set Res to mrOk to let WebUpdate continue the processing.

OnSuccess(Sender: TObject);

Event triggered when the update process has finished successfully.

OnSetAppParams(Sender: TObject; var AppParams: String);

Event triggered to set the application parameters with which the new version is restarted.

OnProcessPostResult(Sender: TObject; var AllowPostResult: Boolean);

When TWebUpdate posts information to the HTTP server, the result of this POST is stored in TWebUpdate.PostUpdateInfo.PostResult. After this, the event OnProcessPostResult is triggered that can be used check this result and depending on this result, allow the update process to continue or not by setting AllowPostResult to true or false.

TWebUpdate control file

The update control file is a .INI organized file to control the update. Following sections and keywords can be used:

The general update section

1) date based updates:

```
[update]
date=16/2/2000
```

This date is compared with the date of the last update (stored in the registry at a location as specified in the LastURLentry property) If the date is later than the date found in the registry, the update continues.
Notice: the data format can be specified with the DateFormat/DateSeparator property of TWebUpdate to allow both US and Euro dates.

Optionally, a time can be specified as well.

```
[update]
date=16/2/2000
time=14:00
```

When no time is specified, 0:00h is assumed. The time format can be customized with the TWebUpdate TimeFormat/TimeSeparator properties.

2) version based updates:

[update]
newversion=1,1,0,0 **OR**
newsize= **OR**
newchecksum=
localversion=application.exe

The new version (major,minor,release,build) or new filesize or new file checksum is compared with the version info, filesize or file checksum of the application as specified with the localversion keyword. If the newversion is newer than the version found in the .EXE (or .DLL) file or the filesize or file checksum is different, the update continues. Note that a custom compare is also possible when using the OnFileVersionCheck event.

The [update] section can hold the optional key

```
signature=
```

This signature value is compared against the TWebUpdate.Signature property when TWebUpdate.SignatureCheck is true. This can be used to check the integrity of the control file. When an incorrect signature is encountered, the OnStatus update is triggered with error parameter ErrUpdateSignatureError.

Actions to do for the update

These actions are specified in the [action] section

```
[action]
updateURL=http://yourserver/update.inf
msg=Automatic web update
query=This is the update version 1.5.0.0 Continue ?
showURL=http://www.yourserver.com/updates/doc.htm
htmldlg=http://www.yourserver.com/updates/dialog.htm
runbefore=
runafter=
```

In the action section following keywords are supported :
- updateURL : will update the URL of the update control file
- msg : simple message displayed during the update
- query : query string allowing the user to cancel the update
- showURL : shows the URL in the default browser
- htmldlg : shows the specified html file at the URL as dialog
- runbefore : run any app. before the update starts
- runafter : run any app. after the updated files are transferred

What's new and EULA options

It is possible to add a reference to a file containing information about what is new in the new version of the application and a file holding the license agreement. This is done in the Whatsnew and EULA sections:

```
[WhatsNew]
file=location of file

[EULA]
file=location of file
```

Example:

```
[WhatsNew]
file=http://www.tmssoftware.com/update/whatsnew.txt
```

Through the TWebUpdate.LanguageID, it is possible to provide different What's new and EULA files for different languages. By setting TWebUpdate.LanguageID to a language specifier, the sections looked for are SectionName + LanguageID.

Suppose a What's new file is available in English and French. The language ID for English is choosen as EN and for French as FR. As such, in the control file, 2 sections are available:

```
[WhatsNewEN]
file=http://www.tmssoftware.com/update/whatsnew_english.txt

[WhatsNewFR]
file=http://www.tmssoftware.com/update/whatsnew_french.txt
```

Before calling TWebUpdate.DoUpdate, the French version of the software would set LanguageID to FR and would download the What's new file whatsnew_french.txt while the English version would set the LanguageID to EN and download whatsnew_english.txt

Number of files to update

The number of new files are defined in the sections [files] with the count keyword

```
[files]
count=2
```

Details of files to update

[file%] (where % is number of the file starting at 1)
url=URL (HTTP), filename (FTP) or UNC (file based)
newversion=1,0,0,0 **OR**
newsize= **OR**
newchecksum=
localversion=application.exe
targetdir=path
descr=your description of the file
compressed=1
filesize=123456
mandatory=0 or 1
hidden=0 or 1

If no newversion keyword is present, the file is always downloaded, otherwise this new version or new file size or new file checksum is compared with the version info, file size or file checksum of the local file defined after the localversion keyword.
The path can be any path and can also contain prefixes : {APP}, {WIN}, {PF} or {TMP}.
{APP} = directory where the current application is running
{WIN} = Windows directory on machine
{PF} = Program Files directory on machine
{TMP} = Temp. directory on machine

If a file must be installed into a subdirectory of the current application running the update, specify {APP}\SUBDIR. If I file must be installed in a subdirectory of the Windows directory use {WIN}\SUBDIR or in the temporary directory with {TMP}\SUBDIR.
Custom prefixes can also be used and these need to be translated to real directories on the system using the OnConvertPrefix event. The 'Descr' details are only used when the OnGetFileList event is used. The OnGetFileList event can be used to query the user for all available updates based on a description rather than the file name. If compress is 1, this means that the file should be decompressed using the lzexpand algorithm, otherwise it is copied.
As an alternative, TWebUpdate also automatically recognizes the .CAB extension and if the property CABExtract is true, these CAB files are extracted as well during the update process. Make sure

though that no application components (ie .EXE and .DLL files) are decompressed in this step. These need to be decompressed in the section [Application] which is discussed further.

The FileSize information can be optionally set. This is used for TWebUpdate to calculate the total file size used during progress indication.

Mandatory can be optionally set to 0 or 1. 1 means that the file is mandatory for the update process. When TWebUpdate is used with the TWebUpdatWizard, this file will be displayed in the list of application components but it will not be possible to uncheck it. 0 is the default value.

Hidden can be optionally set to 0 or 1. 1 means that the file is not displayed in the list of files to download in the TWebUpdateWizard but will be downloaded anyway. 0 is the default value.

Updating application components

To overwrite used .EXE and .DLL files of the running application with the updated files, other file with different names than the ones in use must be used. For the files in use, these can be compressed with the standard Microsoft LZ compression program (COMPRESS -r <file>) When updating, the running application is closed, the files are expanded and the running application (update version) is restarted. The appupdate=1 keyword indicates if application used components need to be updated. The application that must be restarted after the update
is indicated with the appname keyword. Finally, the appcomps keyword indicates a series of LZ compressed files that will be expanded during the update process :

```
[application]
appparam=optional commandline parameters for application restart
appupdate=1
appname=inet.exe
appcomps=inet.ex_ other.dl_ onemore.dl_
silentrestart=0 OR 1
```

As an alternative CAB files are also supported giving the extra flexibility to have long filesnames for application EXE and DLLs files and multiple files per CAB. Instead of specifying the LZ compressed filenames, just add the CAB file names in the appcomps keyword, ie.

```
[application]
appparam=optional commandline parameters for application restart
appupdate=1
appname=CABFileUpdateApp.exe
appcomps=newversion.cab
```

If no compression is wanted, the application filenames can be extended with _NEW suffix. After download and application shutdown, the files will be renamed without their _NEW suffix, replacing the existing older files.

```
[application]
appparam=optional commandline parameters for application restart
appupdate=1
appname=CABFileUpdateApp.exe
appcomps=CABFileUpdateApp.exe_NEW
```

In case the download of the new application is a setup application that needs to be executed, this can be done with specifying the downloaded setup application as application component. Application components with the .EXE file extension are always treated as an application component that needs to be executed.

```
[application]
appparam=optional commandline parameters for application restart
appupdate=1
appname=MyApp.exe
appcomps=MyAppSetup.exe
```

Finally, advanced control of the update process after the application has been closed is possible with specifying a new .INF file for appcomps, ie:

```
[application]
appparam=optional commandline parameters for application restart
appupdate=1
appname=CABFileUpdateApp.exe
appcomps=extraprocess.inf
```

This .INF file is either also downloaded during the update process or available in the application directory. This .INF file structure is simple and contains a list of update files to process as:

```
[FILES]
COUNT=3
FILE1=mysysdlls.cab
TARGET1={WIN}\System
FILE2=myapp.ex_
TARGET2={APP}
FILE3=mynewdb.db_NEW
TARGET3={APP}
```

After the application has been closed, this extra .INF file will be processed and mysysdlls.cab will be extracted to \Windows\System, myapp.ex_ will be expanded to myapp.exe in the application directory and mynewdb.db_NEW will be renamed to mynewdb.db.

When the flag for silentrestart is set to 1, no message dialog is shown before the application is closed and the new version is started. When this flag is not in the .INF file or zero, the default message confirmation dialog for closing the application is shown.

Additional custom validation options

Custom validation can be done based on entries in the control file as well. This is done through the OnCustomValidate event which passes the values found in the following section of the control file :

```
[custom]
validatemsg=
validateparam=
```

This could for example be used to query for a valid password or license to obtain the update. The update will continue if the customvalidate parameter is true upon return.

Other than validation, custom processing of parameters can be done as well through the OnCustomProcess event in which following info from the control file is passed :

```
[custom]
processmsg=
processparam=
```

TWebUpdate control file examples

This is a date-based network file based update control file with an instruction to use a file difference patcher (like the ASTA patch utility) for updating the running application:

```
[update]
date=2/4/2004

[action]
msg=This is a file based update

[files]
count=1

[file1]
url=\\bmw\newapp\patchsample.pat

[application]
appupdate=1
appname=patchsample.exe
appcomps=patchsample.pat
```

This is a date-based HTTP based update control file with an instruction to use a file difference patcher (like the ASTA patch utility) for updating a database:

```
[update]
date=2/4/2004

[action]
msg=This is a file based update

[files]
count=1

[file1]
url=http://www.tmssoftware.com/newapp/cars.pat
localversion=cars.mdb

[application]
appupdate=0
```

This is a version based HTTP based update control file with LZ-compressed updated EXE and a few actions:

```
[update]
newversion=1,1,0,0
localversion=sampapp.exe

[action]
msg=Found updated sample app.
query=Proceed with automatic update ?
```

```
htmldlg=http://www.tmssoftware.com/test.htm

[files]
count=2

[file1]
url=http://www.tmssoftware.com/SAMPAPP.EX_
descr=Application

[file2]
url=http://www.tmssoftware.com/SAMPAPP.BMP
descr=Application logo

[application]
appupdate=1
appname=sampapp.exe
appcomps=sampapp.ex_
```

This is a version based HTTP based update control file with CAB-compressed updated EXE, updated applications DLL's and update database files processed after closing the application:

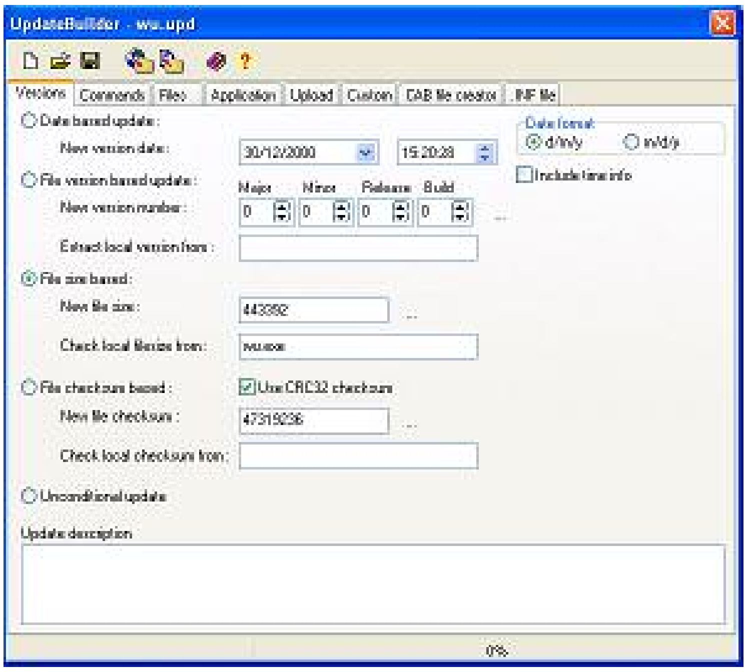
```
[update]
newversion=1,1,0,0
localversion=myapp.exe

[action]
msg=Found updated application.

[files]
count=4

[file1]
url=http://www.tmssoftware.com/MYAPP.CAB
descr=Application

[file2]
url=http://www.tmssoftware.com/MYAPPDLL.CAB
descr=Application dll's

[file3]
url=http://www.tmssoftware.com/MYAPPDB.CAB
descr=Application Database

[file4]
url=http://www.tmssoftware.com/process.INF
descr=Extra
mandatory=1
hidden=1

[application]
appupdate=1
appname=my.exe
appcomps=process.inf
```

with process.INF:

```
[FILES]
COUNT=3
FILE1=MYAPP.CAB
TARGET1={APP}
FILE2=MYAPPDLL.CAB
TARGET2={WIN}\System32
FILE3=MYAPPDB.CAB
TARGET3={APP}\DB
```

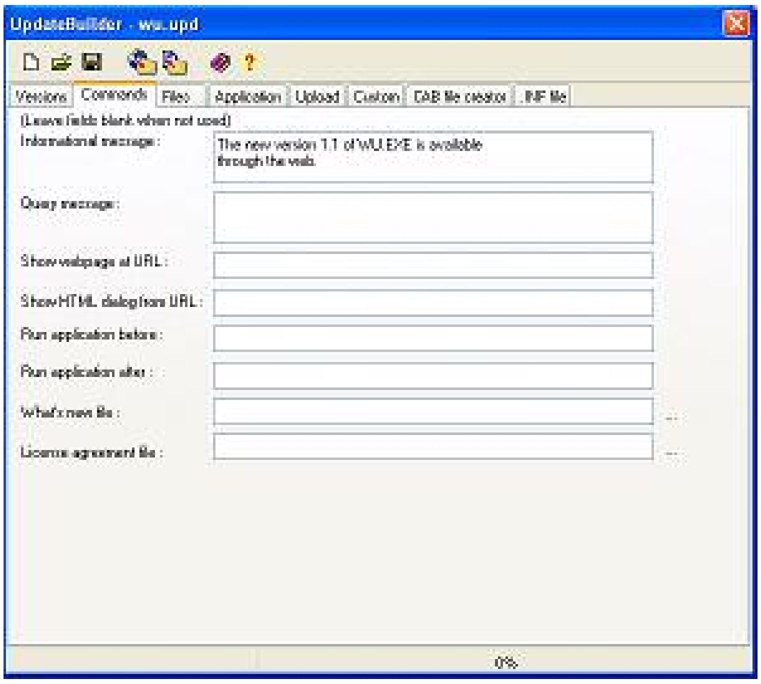
Using UpdateBuilder

UpdateBuilder is an application that can make building update control files easier.



Date based update: [ ]
New version date: 30/12/2000 15:20:28
Date format: [✓ d/m/y] m/d/y
Include time info [ ]
File version based update: [ ]
New version number: Major 0, Minor 0, Release 0, Build 0
Extract local version from:
[✓ File size based:]
New file size: 443392
Check local filesize from: wu.exe
File checksum based: [ ]
[✓ Use CRC32 checksum]
New file checksum: 47319236
Check local checksum from:
Unconditional update [ ]
Update description
0%

The first tab maps on the version update type. Select here whether the update is date, fileversion, filesize, checksum based or unconditional. Note that file selectors are available next to the version info and checksum info. When picking your new .EXE, UpdateBuilder will automatically extract the appropriate information from the new .EXE.



(Leave fields blank when not used)

Informational message : The new version 1.1 of WU.EXE is available through the web.

Query message :

Show webpage at URL :

Show HTML dialog from URL :

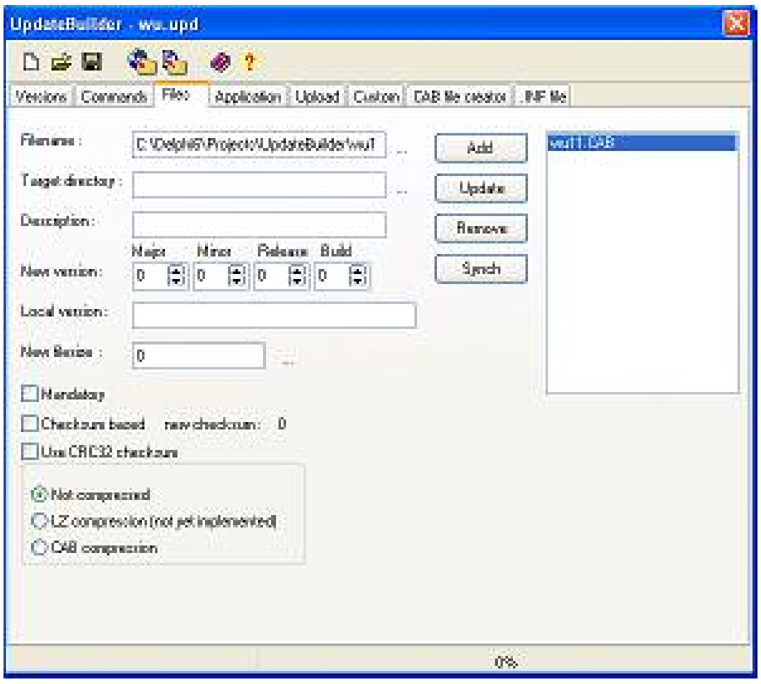
Run application before :

Run application after :

What's new file :

License agreement file :

On the second page, the different action commands for the update control file can be entered.



Filename : C:\Delphi6\Projects\UpdateBuilder\wu1

Target directory :

Description :

	Major	Minor	Release	Build
New version:	0	0	0	0

Local version :

New filesize : 0

☐ Mandatory

☐ Checksum based new checksum: 0

☐ Use CRC32 checksum

[✓ Not compressed]
LZ compression (not yet implemented)
CAB compression

wu11.CAB

On the third page, the list of application components to download can be setup. As each application component can optionally have its own version check, fileversion, filesize of file checksum version info is automatically set when the file is picked. The files added appear in the list on the right.

On the next page, information for the application update itself is entered. All application components that are part of the running executable (ie. EXE, DLL, OCX, …) should be entered separated by tabs in the application components line.

The Upload page holds the settings to allow UpdateBuilder to automatically upload the update to an FTP server or network location.

The Custom tab holds the optionally custom information for the process control file.

The CAB file creator tab allows to build CAB files from several files that are part of the update.

The last tab shows the generated .INF file.

Using TWebUpdateWizard

Using TWebUpdate with the TWebUpdateWizard is straightforward. Drop the TWebUpdate and TWebUpdateWizard on the form, setup TWebUpdate and assign TWebUpdate to the TWebUpdateWizard.WebUpdate property. The wizard can be started by calling TWebUpdateWizard.Execute.

Additional options for the TWebUpdateWizard are:

AutoRun: when true, does not require the user to step through each step
AutoStart: when true, the user does not have to start the update process, it starts automatically
Billboard: sets the left image for the update wizard dialog
BorderStyle: sets the border style for the update wizard dialog
Caption: sets the caption text for the update wizard dialog
Font: sets the font for the update wizard dialog
Language: sets the language for the update wizard dialog. By default, the language is English.
Position: sets the screen position of the update wizard dialog

Writing custom TWebUpdateWizard translation components

It is very simple to create a translated version of the TWebUpdateWizard by providing a TWebUpdateWizardLanguage component. To write a custom version, create a class that descends from TWebUpdateWizardLanguage, override the constructor and provided the translated texts.

As an example, this is the source code for the dutch translated version:

```
constructor TWebUpdateWizardDutch.Create(AOwner: TComponent);
begin
  inherited;
  Welcome := 'Druk start om te beginnen met controleren voor applicatie updates ...';
  StartButton := 'Start';
  NextButton := 'Volgende';
  ExitButton := 'Verlaten';
  CancelButton := 'Annuleren';
  RestartButton := 'Herstarten';
  GetUpdateButton := 'Update';
  NewVersionFound := 'Nieuwe version gevonden';
  NewVersion := 'Nieuwe versie';
  NoNewVersionAvail := 'Geen nieuwe versie beschikbaar.';
  NewVersionAvail := 'Nieuwe versie beschikbaar.';
  CurrentVersion := 'Huidige versie';
  NoFilesFound := 'Geen bestanden gevonden voor update';
  NoUpdateOnServer := 'geen update gevonden op server ...';
  CannotConnect := 'Er kan geen verbinding met de update server tot stand gebracht worden of';
  WhatsNew := 'Nieuw in update';
  License := 'Licentie overeenkomst';
  AcceptLicense := 'Ik aanvaard';
  NotAcceptLicense := 'Ik aanvaard niet';
  ComponentsAvail := 'Beschikbare applicatie componenten';
  DownloadingFiles := 'Downloaden bestanden';
  CurrentProgress := 'Vooruitgang huidig bestand';
  TotalProgress := 'Totale vooruitgang';
  UpdateComplete := 'Update volledig ...';
  RestartInfo := 'Druk Herstarten om de nieuwe versie te starten.';
end;
```