z88dk Windows setup

the build process

author: Marcello Zaniboni

www.geocities.com/marcellozaniboni
mzaniboni@hotmail.com

Document contents

Introduction

In this document I'll explain how to build the Win32 setup for z88dk.
Since I started building the setup from version 1.6 (and at the moment I am writing it's the current version), this document describes the setup for this release. After having read this document, you should be able to generalize the concepts for further z88dk releases.

What you need to build the setup

In order to build the setup application, you have to download some stuff. Here is the complete list.

The z88dk setup kit

This is a zip file containing the information needed to build the setup executable. You can download it from the CVS (`z88dk-win32-SetupKit-1.6.zip`).

The z88dk source and win32 binaries

Download z88dk from z88dk official site: you need two zip files: the source and the win32 binaries: for z88dk 1.6 the two files are `z88dk-src-1.6.tgz` and `z88dk-win32-1.6.zip`.

Inno Setup

The setup can be built using Inno Setup (www.innosetup.com), a freeware installer tool that provides a setup compiler. The original z88dk 1.6 setup has been built with Inno Setup version 5.0.8.

The MinGW C compiler (optional)

Inno setup is a very good application, but missed a feature that is needed by z88dk setup. Therefore I had to implement an extension, which consists of an additional application, automatically launched after the file copy has ended. I wrote this application in C language and I compiled it using MinGW (www.mingw.org).
The z88dk setup kit contains the source of the extension and its compiled version. Hence the compiler is optional; by the way, if you want to compile the extension yourself, you can download the compiler and use the script `compile.bat`.

ISTool (optional)

ISTool (www.istool.org) is a simple but effective IDE for Inno Setup. It allows you to edit installaton scripts and to run the compiler. It's optional because you can choose to use directly the commands of Inno Setup from the command prompt.

Preparing the environment

Crate a directory in your PC, let's say `C:\z88dk_setup`. In this directory we will prepare the build environment

Expand the z88dk win32 binary zip into that directory. You have to get the following directory structure (maybe you will need to eliminate one directory level)

Create two subdirectories: **noarch** and **setup**, in order to obtain the following folder tree:
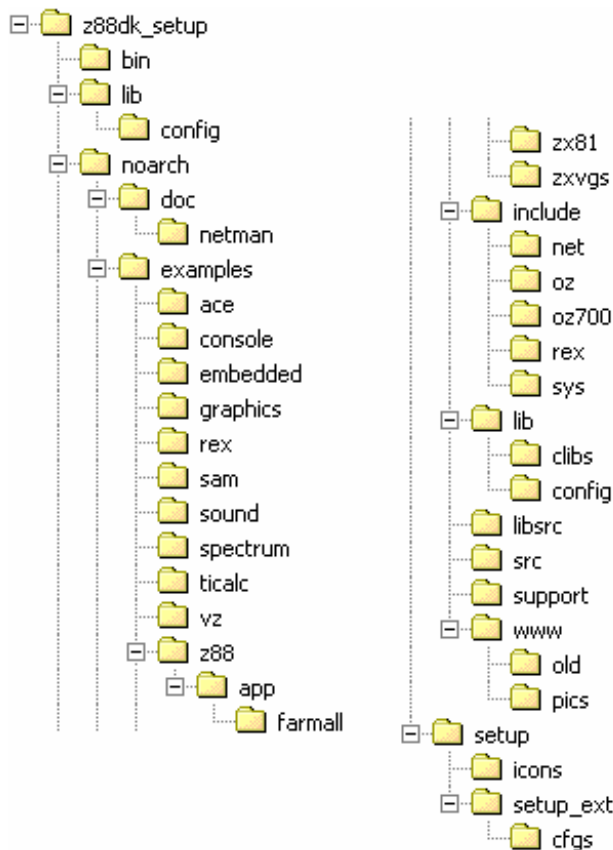

Extract **z88dk-src-1.6.tgz** to **noarch** and the setup kit zip to **setup**.

At this point, you have to zip some folders (in fact, the setup script actually do not include every single folder - the script can be modified properly in future to allow this). You have to archive all the content (directories and files) of the following folders in zip files and delete the archived files/folders, so that the zip file is the only file they contain:

```
C:\z88dk_setup\noarch\doc\netman
C:\z88dk_setup\noarch\libsrc
C:\z88dk_setup\noarch\src
C:\z88dk_setup\noarch\support
```

The resulting directory tree, expanded in all its sub-folders, is reported in the following image:

```
z88dk_setup
├── bin
├── lib
│   └── config
├── noarch
│   ├── doc
│   │   └── netman
│   ├── examples
│   │   ├── ace
│   │   ├── console
│   │   ├── embedded
│   │   ├── graphics
│   │   ├── rex
│   │   ├── sam
│   │   ├── sound
│   │   ├── spectrum
│   │   ├── ticalc
│   │   └── vz
│   ├── z88
│   │   └── app
│   │       └── farmall
│   │               zx81
│   │               zxvgs
│   ├── include
│   │   ├── net
│   │   ├── oz
│   │   ├── oz700
│   │   ├── rex
│   │   └── sys
│   ├── lib
│   │   ├── clibs
│   │   └── config
│   ├── libsrc
│   ├── src
│   ├── support
│   └── www
│       ├── old
│       └── pics
├── setup
│   ├── icons
│   └── setup_ext
│       └── cfgs
```

A brief explanation of the setup script

The installer compiler (Inno Setup) builds setup applications by means of scripts, which are ASCII text files with a format somewhat similar to .INI files.
You will find the script for z88dk setup in `C:\z88dk_setup\setup\z88dk.iss`.
The script consists of
- a list of files/folders: each item of the list defines a mapping between your setup build directory (here `C:\z88dk_setup`) and the installation folders
- component definitions: the selectable packages (optional or not), like the source code, examples, the compiler itself, etc.
- registry keys: in this setup they are used to set the environment variables
- the [run] section ... I will explain this in a moment.

Each of these items is parametric, depending the installation directory, the version of the target OS and other variables.

The [run] contains the setup extension: after the file copy, it executes the application `deploy_z88dk.exe` in the default Windows temporary folder. Obviously `deploy_z88dk.exe` and its needed data were copied over there before (you can notice it in the [file] section).
The extension writes the installation directory short name inside the cfg files.

The building process

Before launching the setup compiler, you have to edit the following fields in the script
- SourceDir must be equal to the build folder (here `C:\z88dk_setup\setup`)

- OutputDir is the location the compiled setup application will be placed... you can choose what you want.

Now you can compile the script. You can do it directly using Inno Setup commands or via ISTool (I prefer the last choice). That's all.

Credits

Thanks to the z88dk team for developing such a good tool.

z88dk setup team
developer: Marcello Zaniboni
technical consultant: Stefano Bodrato
graphics: Luciano "Lucky" Costarelli