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Subject: Self-install / uninstall in Win32

Posted by [mirek](#) on Wed, 27 Jun 2007 11:16:15 GMT

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This is not matured enough to be put into "uppsrc", but I think it is an interesting piece of code anyway: It allows an application .exe to "selfinstall" to Program Files and Desktop, with registration to windows "Remove programs" dialog (and uninstallation):

```
#include "zaci.h"
```

```
#define Ptr Ptr_  
#define byte byte_  
#define CY win32_CY_
```

```
#include <winns.h>  
#include <winnetwk.h>
```

```
#include <wincon.h>  
#include <shlobj.h>
```

```
#undef Ptr  
#undef byte  
#undef CY
```

```
String GetShellFolder(const char *name, HKEY type)  
{  
    return GetWinRegString(name, "Software\\Microsoft\\Windows\\CurrentVersion\\Explorer\\Shell  
Folders", type);  
}
```

```
void DelKey(const char *dir, const char *key)  
{  
    HKEY hkey;  
    if(RegOpenKeyEx(HKEY_LOCAL_MACHINE, dir, 0, KEY_READ, &hkey) != ERROR_SUCCESS)  
        return;  
    RegDeleteKey(hkey, key);  
    RegCloseKey(hkey);  
}
```

```
void Uninstall(String folder, String name)  
{  
    String path = GetExeFilePath();  
    String bat = AppendFileName(GetShellFolder("Desktop", HKEY_CURRENT_USER),  
"removepp.bat");  
    String dir = GetFileFolder(path);
```

```

return;
DeleteFolderDeep(dir);

DeleteFile(AppendFileName(GetShellFolder("Desktop", HKEY_CURRENT_USER), name +
".lnk"));

DelKey("SOFTWARE\\Microsoft\\Windows\\CurrentVersion\\Uninstall\\" + folder, "DisplayName");
DelKey("SOFTWARE\\Microsoft\\Windows\\CurrentVersion\\Uninstall\\" + folder,
"UninstallString");
DelKey("SOFTWARE\\Microsoft\\Windows\\CurrentVersion\\Uninstall", folder);

SaveFile(bat,
":Repeat\r\n"
"del \"" + path + "\\r\n"
"if exist \"" + path + "\" goto Repeat\r\n"
"rmdir \"" + dir + "\\r\n"
"del \"" + bat + "\\r\n"
);

STARTUPINFO si;
PROCESS_INFORMATION pi;
ZeroMemory(&si, sizeof(si));
si.cb = sizeof(si);
si.dwFlags = STARTF_USESHOWWINDOW;
si.wShowWindow = SW_HIDE;
char h[512];
strcpy(h, bat);
CreateProcess(NULL, h, NULL, NULL, FALSE,
IDLE_PRIORITY_CLASS, NULL, GetShellFolder("Desktop", HKEY_CURRENT_USER),
&si, &pi);
}

void InstallUninstall(const char *name, const char *dname, const char *cmdline)
{
String path = "SOFTWARE\\Microsoft\\Windows\\CurrentVersion\\Uninstall\\" + String(name);
SetWinRegString(dname, "DisplayName", path);
SetWinRegString(cmdline, "UninstallString", path);
}

bool Install(const char *folder, const char *exe, const char *desc)
{
String lnk = String(desc) + ".lnk";
const Vector<String>& arg = CommandLine();
for(int i = 0; i < arg.GetCount(); i++)
if(arg[i] == "--uninstall") {
Uninstall(folder, desc);
return true;
}
}

```

```

String exeFile = GetExeFilePath();

char windows_path[MAX_PATH];
GetWindowsDirectory(windows_path, MAX_PATH);

String program_files(windows_path[0], 1);
program_files << "\\Program Files";
String target = program_files + "\\ " + folder + "\\ " + exe;

if(strcmpi(exeFile, target)) {
    Progress pi;
    pi.SetText("Instaluj program..");
    pi.SetTotal((int)(GetFileLength(exeFile) / 16384 - 1));
    pi.Create();
    CreateDirectory(program_files, NULL);
    CreateDirectory(program_files + "\\ " + folder, NULL);
    FileIn in(exeFile);
    FileOut out(target);
    if(!in || !out) {
        Exclamation("Program nelze nainstalovat.");
        return true;
    }

    int n;
    Buffer<byte> b(16384);
    for(;;) {
        pi.StepCanceled();
        n = in.Get(b, 16384);
        if(n <= 0) break;
        out.Put(b, n);
        if(out.IsError()) break;
    }

    out.Close();

    if(in.IsError() || out.IsError()) {
        Exclamation("Program nelze nainstalovat.");
        return true;
    }

    String desktop_path = GetShellFolder("Desktop", HKEY_CURRENT_USER);

    String linkpath = AppendFileName(desktop_path, lnk);

    HRESULT hres;
    IShellLink* psl;
    IPersistFile* ppf;

```

```

ColInitialize(NULL);
hres = CoCreateInstance(CLSID_ShellLink, NULL, CLSCTX_INPROC_SERVER, IID_IShellLink,
    (PVOID *) &psl);
const char *pszLinkFilePathname = linkpath;
if(SUCCEEDED(hres)) {
    psl->SetPath(target);
    psl->SetDescription(desc);
    hres = psl->QueryInterface(IID_IPersistFile, (PVOID *) &ppf);
    if (SUCCEEDED(hres)) {
#ifdef UNICODE
        WCHAR szPath[_MAX_PATH] = { 0 };
        MultiByteToWideChar(CP_ACP, 0, pszLinkFilePathname,
            strlen(pszLinkFilePathname), szPath, _MAX_PATH);
        hres = ppf->Save(szPath, TRUE);
#else
        hres = ppf->Save(pszLinkFilePathname, TRUE);
#endif
        ppf->Release();
    }
}
psl->Release();
CoUninitialize();

```

```

InstallUninstall(folder, desc, target + " --uninstall");

```

```

WinExec(target, SW_SHOWNORMAL);
return true;
}
return false;
}

```

In GUI\_APP\_MAIN, you use it like this:

```

GUI_APP_MAIN
{
    if(Install("my_app_folder_and_id", "MyApp.exe", "My application name")) return;
}

```