

Installation issues

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1 Introduction

Installation of FieldWorks is usually straightforward if you use the master installer (setup.exe) because it determines all the needed supporting software and makes sure everything is properly installed. The underlying installation process is incredibly complex. Various pieces need to be installed and quirks may be encountered on a few computers, such as registry keys that are write-protected for some unknown reason. Master installer installations usually proceed smoothly, but on a few occasions something fails. This document discusses the overall process and gives a few suggestions if something goes wrong.

FieldWorks 5.4 includes the core components of SIL Encoding Converters 3.0. If you have a full older package of SIL Encoding Converters, we recommend you install SIL Encoding Converters 3.0 available for download from

http://scripts.sil.org/cms/scripts/page.php?site_id=nrsi&item_id=EncCnvtrs.

If you used any versions of FieldWorks between official releases, before installing the current version, do the following:

1. Go to Start...Settings...Control Panel...Add or Remove Programs.
2. Uninstall SIL FieldWorks.

2 Downloading stable releases

2.1 FieldWorks 5.4

FieldWorks 5.4 is a stable release that can be downloaded and installed free of charge. It is available in either the Bible Translation Edition (BTE) or the Standard Edition (SE). There are several options and download sizes, depending on how much you need to install and what you want to download. The Web site has a link you can click to analyze your computer and tell you which version is recommended, provided you have Microsoft Internet Explorer 6 or later.

- FW*_A allows you to install FieldWorks on any computer where FieldWorks has not yet been installed.
- FW*_B will work if you are upgrading from FieldWorks 4.9 or later since SQL Server Express and other requirements will already be present.

Each version contains readme and help files, but not the movie files. If you want the movies, you need to download them separately and copy them to the correct directory. ???The help files and readme files are available separately to download if you want to look at them prior to downloading and installing FieldWorks.???

2.1.1 Download information

- BTE (with TE) at http://fieldworks.sil.org/BTE-FW_downloads.htm
- Master installer setup.exe (1,354 Kb)
 - FW54_BTE_A.exe (213,700Kb)
 - FW54_BTE_B.exe (156,583Kb)
 - Help files
 - FieldWorks_Data_Notebook_Help.chm (606 KB)
 - FieldWorks_Language_Explorer_Help.chm (2,240 KB)
 - FieldWorks_WorldPad_Help.chm (164 KB)
 - FieldWorks_Translation_Editor_Help.chm (371 KB)
 - FieldWorks_Topics_List_Editor_Help.chm (291 KB)
 - Movies
 - Flex_M.cab (160,289 KB) contains the Language Explorer demo movies
 - TE_M.cab (12,322 KB) contains the Translation Editor tutorial movies
 - ReadMe files
 - DNReadMe.rtf (110 KB)
 - FLExReadMe.rtf (478 KB)

- ReadMe.rtf (5,772 KB)
- SetupFW.rtf (750 KB)
- WPreadMe.rtf (137 KB)
- TereadMe.rtf (92 KB)
- SE (without TE) at http://fieldworks.sil.org/FW_downloads.htm
 - FW54_SE_A.exe (202,104Kb)
 - FW54_SE_B.exe (144,988Kb)
 - FW 5.0 SE only.exe (138,182 KB)
 - FW 5.0 SE with SQL and accessories.exe (202,910 KB)
 - FW 5.0 SE with SQL.exe (176,689 KB)
 - Help files
 - FieldWorks_Data_Notebook_Help.chm (589 KB)
 - FieldWorks_Language_Explorer_Help.chm (1,471 KB)
 - FieldWorks_WorldPad_Help.chm (157 KB)
 - Movies
 - Flex_M.cab (160,289 KB) contains the Language Explorer demo movies
 - ReadMe files
 - DNReadMe.rtf (110 KB)
 - FLExReadMe.rtf (478 KB)
 - ReadMe.rtf (5,767 KB)
 - SetupFW.rtf (748 KB)
 - WPreadMe.rtf (137 KB)

To use one of these versions, do the following:

1. Download one exe file and optionally one or two movie files.
2. Launch the exe file to extract the contents to a folder you specify.
3. If you downloaded movie files, copy these into the FieldWorks folder created in step 2, which should have SetupFW.msi.
4. If you installed a non-corporate/stable release of FieldWorks, follow the steps in the Introduction to uninstall FieldWorks.
5. Launch Setup.exe from the folder created in step 2.
6. If you downloaded and copied the movie file(s), when you get to the Select Features screen, make sure they are selected.
Tip: To alter the setting, click the icon(s) and select the option you want from the popup menu.
7. Finish the installation.

3 Installation details

FieldWorks 5.4 requires the following minimal supporting software:

- Windows XP with SP2 or Windows Vista Service Pack 1 (Windows 2000 with SP3 probably works, but is untested) or Windows 64-bit Vista.
- Windows Installer 3.1. (included in all installation packages)
- Microsoft Internet Explorer 6.0 SP1
- Microsoft .NET Framework 2.0 SP1 (included in all installation packages)
- Microsoft Text Services Framework (part of Windows XP/Vista but needed on Windows 2000)

- Microsoft SQL Server 2005 Express with SP2 (a named SILFW instance)
- SIL Encoding Converters 3.0 core components (included in all installation packages)

The master installer will add the above items if they are missing, or will tell you where to go to get any software not included on your computer.

The default installation installs software in the following directories:

- c:\Program Files\Common Files\SIL (SIL Encoding Converter programs)
- %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks (FieldWorks databases and common files that change during operation)
Note: %ALLUSERSPROFILE%\Application Data is c:\Documents and Settings\All Users\Application Data on Windows XP and c:\ProgramData on Vista.
- %ALLUSERSPROFILE%\Application Data\SIL\Icu36 (ICU file for writing systems, converters, etc.)
Note: Prior to installing new ICU files, any old files in the Icu36 directory are deleted, thus insuring a clean installation of ICU.
- %ALLUSERSPROFILE%\Application Data\SIL\MapsTables (converters installed by SIL Encoding Converters)
- %ALLUSERSPROFILE%\Application Data\SIL\Repository (converter repository for SIL Encoding Converters)
- c:\Program Files\SIL\FieldWorks (FieldWorks applications and non-user modified files)
- c:\Program Files\Microsoft SQL Server (core SQL Server 2005 Express installation).
When upgrading from MSDE it will use the original c:\Program Files\FieldWorks\MSSQL\$SILFW directory.
- SilEncConverters22.dll V2.6.1 in the Global Assembly Cache (GAC).

The installer creates the following root registry keys and critical values:

- HKEY_CURRENT_USER\Software\SIL\FieldWorks
- HKEY_LOCAL_MACHINE\SOFTWARE\SIL
 - Icu36DataDir set to %ALLUSERSPROFILE%\Application Data\SIL\Icu36\icudt36l
 - Icu36Dir set to %ALLUSERSPROFILE%\Application Data\SIL\Icu36
 - InitIcu set to 1 (normally cleared to 0 by post installation process)
 - FieldWorks key with
 - RootCodeDir set to c:\Program Files\SIL\FieldWorks
 - RootDataDir set to %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks
 - InitMSDE set to 1 (normally cleared to 0 by post installation process)
 - DbDir set to %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks\Data
 - EncodingConverterRepository key with location to repository
 - SilEncConverters30 key with values for Encoding Converters.
- Numerous keys in HKEY_CLASSES_ROOT from DLL registrations

Near the end of installation, the master installer

- calls FwNotebook.exe and FwListEditor.exe with a “-RegServer” command line argument to register these programs
- if it uninstalled a previous version of FieldWorks, it calls MoveData.exe from the c:\Program Files\SIL\FieldWorks directory to move any old databases, pictures, media files, and language definitions from an old c:\Program Files\FieldWorks directory to %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks

- if it uninstalled a previous version of FieldWorks, it calls EncConvertersAppDataMover.exe from c:\Program Files\Common Files\SIL to move repository and mapping tables files from c:\Common Files\SIL to %ALLUSERSPROFILE%\Application Data\SIL.
- calls InstallLanguage on any language *.xml files in %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks\Languages, registering them into ICU
- sets accounts and some stored procedures in the master database, then attaches all *.mdf databases in %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks\Data, thus making all projects available
- registers SilEncConverters30.dll in the GAC and create the first repository in %ALLUSERSPROFILE%\Application Data\SIL\Repository.
- Sets the directories under %ALLUSERSPROFILE%\Application Data\SIL to be writeable by Authenticated Users. This allows programs to work for non-Administrative users.

Note: SQL Server requires all databases to be uncompressed. The installer tests for a compressed data directory and if found, notifies the user that they need to uncompress this folder. If FieldWorks is run with the data directory compressed, it will issue a similar error message and then stop.

Note: If a non-administrative user worked on a Vista machine, files they modify under Program Files will not actually be modified under Program Files. Instead, a virtual copy is kept at C:\Users\\AppData\Local\VirtualStore\Program Files. The data movers only copy from Program Files, so they will miss any virtual files. If these files are important, you'll need to copy them manually to the new location. One entire FieldWorks installation ended up in this directory and blocked the new installation from working until the user uninstalled the current version, deleted the FieldWorks directory under the virtual store, then reinstalled FieldWorks.

Note: If you've modified your WordFormingCharOverrides.xml file in the FieldWorks directory, make a backup of this prior to installation and make sure the changes you made are in the final copy after installation. Failure to do this will likely damage your wordforms and interlinearization. The master FieldWorks 5.0 installer will keep your old file as long as it can find it based on uninstalling a previous version. However, if you manually uninstall an older version of FieldWorks prior to installation, the old file will be removed before the installer can recover it. In this case, after installing the new version you'll need to restore your older WordFormingCharOverrides.xml file before opening Flex.

Note: When SQL Server 2005 Express is installed for the first time, the core programs are installed in C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL. If there are other instances of SQL Server 2005 on your computer MSSQL1 will be incremented to an unused number. If you had an earlier version of FieldWorks before Version 4.2 installed on your computer, the older database engine was stored in c:\Program Files\FieldWorks\MSSQL\$SILFW. If you are upgrading from this copy, the program files are updated in this directory to the new versions, so you'll continue to use this directory. One way to tell where your version of SQL Server is located is to use Start...Programs...Microsoft SQL Server 2005...Configuration Tools...SQL Server Configuration Manager. In the right pane, right-click SQL Server (SILFW) and choose Properties. Click Advanced tab and check the Install Path value.

Whenever you run a FieldWorks application, it does the following:

- Checks InitIcu, and when set, calls InstallLanguage on any language *.xml files in %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks\Languages, registering them into ICU. (This process is normally called from the master installer.)
- Checks InitMSDE, and when set, sets accounts and some stored procedures in the master database, then attaches all *.mdf databases in %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks\Data, thus making all projects available. (This process is normally called from the master installer.)
- Checks the version number of the database being opened, and migrates an older database to the current version.

4 Minimizing space used on drive C

If it is critical to minimize the space FieldWorks takes on drive C, there are two things you can do. During installation you can choose any directory to use for the FieldWorks program files. By default they are installed in C:\Program Files\SIL\FieldWorks. This approach is safe for anyone to use.

FieldWorks data files (including databases, pictures, and media files) are installed in %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks. This directory can be moved to another drive or location if essential, but the installer does not provide an option for this. If you move these directories, when you uninstall FieldWorks, the installed files will not be removed. Furthermore a new installation will put the files back in their original location and may occasionally fail to upgrade something from an older installation. It would also require some manual moving of database files to get everything to work after a reinstallation. So you should not attempt moving this directory unless you are prepared to handle various technical problems with uninstalling and upgrading FieldWorks. Also, this directory contains database files that are expected to be present when SQL Server starts (normally each time you boot). So moving this directory to a removable drive would not be recommended unless you take special steps to detach databases prior to removing the drive and attaching them after replacing the drive. If you are prepared to handle the above problems, the directory can be moved initially using these steps.

1. All FieldWorks databases must first be detached. From a command window, type
db fwnames
For each database name listed, plus Ethnologue which is not listed, type the following command:
db detach "name"
2. Move the FieldWorks directory to the desired location.
3. Change the path to match your new location in RootDataDir, DbDir, and InstallLanguageLog string values in the registry under HKLM\Software\SIL\FieldWorks.
4. Attach all databases in the new location. From a command window, type
db attach Ethnologue
db initialize
The initialize command should attach all of the FieldWorks databases.

After an upgrade to a new version, you should also execute this command from a command window to reinitialize the ICU file based on your writing systems.

```
InstallLanguage -o
```

5 Setup for non-administrative users

FieldWorks must be installed by a Windows Administrator. FieldWorks applications will run normally from non-administrative user accounts. There are a few other restrictions for User level users:

- Limited users cannot stop or start SQL Server. By default, SQL Server will start every time the machine is booted, so this will not be a problem. An administrator can check or set this by right-clicking My Computer and choosing Manage. Go to the Services and double-click SQL Server (SILFW) (or MSSQL\$SILFW for versions prior to FieldWorks 4.2). Make sure the Startup type is set to Automatic. If SQL Server is not running, a limited user will not be able to run FieldWorks applications (other than WorldPad).

6 Using FieldWorks in a computer lab

In a computer lab, the administrator generally does not want students to have administrative privileges on lab computers. Thus if they want to use FieldWorks, they need to consider the issues in the previous section. If they give students Power User capability, it will require much less setup on individual machines. If they give students User capability, they will need to make the adjustments described in section 4.1.

The actual databases used by FieldWorks are stored in %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks\Data. These database files are not what users should back up. Instead, users should use the FieldWorks Backup and Restore dialog to back up their data. The default for this is in My Documents\My FieldWorks\Backups, but the user can store the backup in any directory. These backup files are the ones users should protect and they can be used to restore on other machines.

Here are several possible scenarios for lab use.

6.1 Individual computers

If there are enough computers that each student can be assigned their own machine, then there is nothing special that needs to be done.

6.2 Networked server

In this scenario, one computer would be set up with all of the student's databases, and students would log on to their database remotely from any of the lab computers.

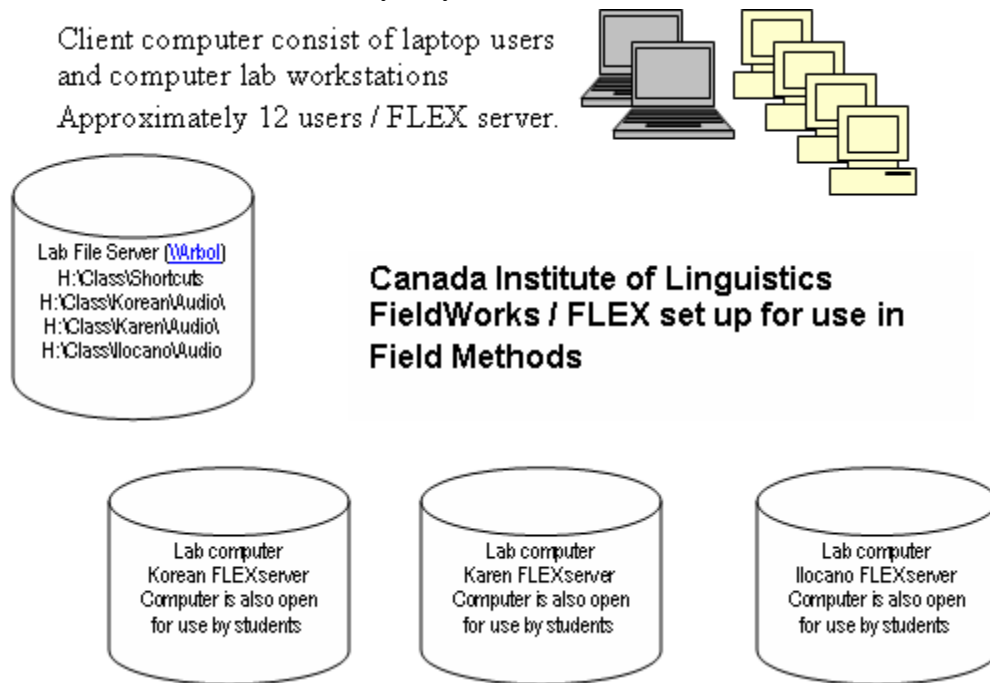
Here are some things to consider with this approach.

- It would not be possible for users to add sound and picture files as well as external links when working remotely.
- The user can't do backup/restore when on another machine. The lab manager would need to control this (possibly by an automatic backup via task scheduler).
- An instructor can easily look at any student databases on-line, if he desired.
- Students could look at any other student's database. This probably is not desirable.
- Students could not create or delete their databases on the server. This would have to be done for them on the server.
- Networked operation is somewhat slower than local work.

- Students would have the usual potential problems with keyboards, fonts, and encoding converters needing to be installed on each lab computer. Other than initial installation, there could be conflicts if two students used the same writing system but tried to use different collations, fonts, or keyboards. FieldWorks treats the language XML file in the %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks\Languages directory as the master copy. So if one student makes a change to a writing system, the next student that uses the same writing system will have their database updated from the language XML file. If this becomes an issue, the InstallLanguage program can be called as part of the cleanup operation to delete the writing systems when the student leaves.

6.2.1 Canada Institute of Linguistics

The Canada Institute of Linguistics uses this approach with around 12 users per servers. This information comes from Larry Hayashi on November 6, 2007.



6.2.1.1 FLEX Servers setup

Each server has a dual-core processor with 2GB RAM. We are using the version of SQL Server that installs with FLEX but are thinking of using the full version of SQL Server 2005 on a dedicated server. Each FLEX server is also used by the students for other purposes and for the most part, this has not been a problem. A registry entry change was made to allow SQL Server to use more RAM.

Backup: Each FLEX Server runs a backup on the SQL Server database every hour. Backup are stored locally on each FLEX Server. Each day has its own folder so if necessary we can go to an earlier backup of the day or week to find or restore data. We also copy the last backup of each day to the lab file server for extra insurance should a hard drive fail on one of the FLEX Servers. Doug Rintoul figured out how to make all

this work very smoothly in addition to the audio file batches below. He put together the following python script which is run using Windows Task Scheduler.

```
#!/usr/bin/python
# Backup a FieldWorks language database
# Written by Doug Rintoul
# October 1, 2007

import os, time, shutil
# Set the database to backup here.
database="Korean"
remoteDestinationFolder="\\\\\\arbol\\h_drive\\FMFWBackups"
dataFolder="C:\\Program Files\\FieldWorks\\Data"
backupFolder=os.path.join(dataFolder,"Backups")
logFileName=os.path.join(dataFolder,database+".log")
iniFileName=os.path.join(dataFolder,"backup.ini")
currentTime=time.localtime()

# Get the backup sequence number. Default to 1 if backup.ini does not exist.
try:
    currentBackupINI=open(iniFileName)
    currentBackup=int(currentBackupINI.readline().strip())
    lastBackupTime=time.strptime(currentBackupINI.readline().strip())
    currentBackupINI.close()
    # If this is the first backup of the day then reset the sequence number
    to 1
    if lastBackupTime[2] != currentTime[2]:
        currentBackup=1
except:
    currentBackup=1

# Do the backup
os.system('db backup '+database)

# Move the backup file to the destination folder and next backup sequence
weekDay= time.strftime("%A", currentTime)
destinationFolder=os.path.join(backupFolder,weekDay)

# Create the backup folder if it does not exist
if not os.path.exists(backupFolder):
    os.mkdir(backupFolder)

# Create the destination folder if it does not exist
if not os.path.exists(destinationFolder):
    os.mkdir(destinationFolder)

# Form the backup file name
backupFileName=os.path.join(destinationFolder,database+'-%d' %
(currentBackup)+'.bak')
compressedBackupFileName=os.path.join(destinationFolder,database+'-%d' %
(currentBackup)+'.zip')

# delete the backup file if it exists
if os.path.exists(compressedBackupFileName):
    os.remove(compressedBackupFileName)

# Move and compress the backup file to the destination folder
cmd='7za a -tzip "'+ compressedBackupFileName + '" "' +
os.path.join(dataFolder,database+'.bak')+'"'
os.system(cmd)

#shutil.move(os.path.join(dataFolder,database+'.bak'), backupFileName)
```

```
#os.system('gzip "'+backupFileName+'")

# Copy the first backup of the day to a remote location
if currentBackup == 1:
    shutil.copy(compressedBackupFileName, remoteDestinationFolder)

# Increment backup sequence number and save it
nextBackup=currentBackup+1
currentBackupINI=open(iniFileName,"w")
currentBackupINI.write('%d\n' % (nextBackup))
# And save the current time
currentBackupINI.write('%s\n' % (time.asctime(currentTime)))
currentBackupINI.close()

# Log this backup
logFile=open(logFileName,"a")
logFile.write("%s - Database %s backed up to %s\n" %
(time.asctime(time.localtime()), database, compressedBackupFileName))
logFile.close()
```

Audio files: Students store their audio files on the lab file server in a mapped directory as shown above. When they make links to these audio files, FLEX currently creates a local client copy of the file in Program Files\FieldWorks\Media and sets a hidden FLEX system field (InternalPath) to this new local copy path. This path is the one used when a user hits the play button for a pronunciation. This system has many problems in a network environment. The system does not provide for nested directories, and more importantly, other clients cannot access these files.

To get around this we currently run a batch file every 10 minutes on the FLEX Servers that copies the real path over the InternalPath. Both paths are now the same and when the user plays a pronunciation, FLEX plays the file from the lab server (using the mapped directory). Windows Task Scheduler is used to execute the batch file.

Here is the batch file:

```
db exec UpIntPath.sql Korean
```

Here is the UpIntPath.sql file:

```
update CmFile
set InternalPath = OriginalPath;
```

At the end of each day, we run a batch file to clean out Program Files\FieldWorks\Media on each lab computer. Laptop clients are currently oblivious to the local copies of audio files made when they link a pronunciation to a media file.

6.2.1.2 Student groups

Students work in pairs with Language Resource Persons.

Once a week we convene together with LRPs to elicit data together and to discuss problems we are running into.

Students enter their “pair” data into FLEX. This includes:

- Swadesh wordlist data (divvied up amongst each Language group)
- Audio recordings
- Semantic domain collection data (each group makes sure there is no overlap)
- The text that each pair collects from the LRP.
- Their interlinear work

We are currently working in groups on texts and working through all the issues that come with this which includes:

- Different spellings of the same word
- Different spellings of the same lexical entry
- Different word breaks
- Different analyses

It's a bit of a mess actually :) I'll give a full report in February when I have recovered from it.

6.3 Rotation between lab computers

In this scenario, students work on any available lab computer. They need to restore their database to the current machine at the start of their lab session, and back it up to a network and/or removable drive at the end of their lab session.

Here are some things to consider with this approach.

- If it is desirable to keep students from seeing other student's work, a process could be set up where each student makes a backup to their network drive (and optionally removable media) when their lab session ends, then delete their database from the lab machine. This also gets around the current problem of restoring over an existing database.
- If students are adding pictures, sound files, or external links to their data, some method will need to be worked out to copy all of the linked files (pictures and sound are currently stored under %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks\Pictures and %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks\Media directories) to their network drive and then copied back to the appropriate locations on the lab computer when the student begins working again.
- Students would have the usual potential problems with keyboards, fonts, and encoding converters needing to be installed on each lab computer. Other than initial installation, there could be conflicts if two students used the same writing system but tried to use different collations, fonts, or keyboards. FieldWorks treats the language XML file in the %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks\Languages directory as the master copy. So if one student makes a change to a writing system, the next student that uses the same writing system will have their database updated from the language XML file. If this becomes an issue, the InstallLanguage program can be called as part of the cleanup operation to delete the writing systems when the student leaves.
- One option for cleanup at the end of a lab session is to make a batch file for each student, probably saved on their network drive, that deletes the database and vernacular languages they use. Something similar to the following two lines would work.


```
db delete Korean
installlanguage -r ko
```

 If pictures or sound files are used, this batch file could also copy all files from FieldWorks\Pictures and FieldWorks\Media to the student's network drive, then these directories could be cleared.

6.3.1 Graduate Institute of Applied Linguistics

The Graduate Institute of Applied Linguistics uses this approach in their PCLAB. Users are given power user privileges. Students work on their projects on any of the lab computers. For administrative purposes, users are only allowed to backup their projects to their personal data directory on a network mapped drive N:. When a project is restored to overwrite the existing project under the same name, FW saves the existing project as a safety net before it is overwritten. A script is put in place to point FW to the designated safety net location. The script programs the registry key, HKCU\Software\SIL\FieldWorks\ProjectBackup\Basics\DefaultBackupDirectory, to N:\FW_SafetyNet. Another administrative task is that once a day, user projects in the FieldWorks\Data directory are deleted from the lab computers. This is performed by a scheduled task.

7 Troubleshooting

Any time you are having trouble installing when you have had a previous version of FieldWorks or SIL Encoding Converters installed, be sure to completely uninstall these before trying again, and make sure all files are deleted. If you started with a version of FieldWorks older than Version 4.2, you should not delete the c:\Program Files\FieldWorks\MSSQL\$SILFW directory unless you first uninstall Microsoft SQL Server Desktop Engine (silfw) (or possibly Microsoft SQL Server 2005 if it is using this directory). Sometimes old files or partially uninstalled systems can cause various problems. For Vista machines, old files may be in C:\Users\<User_name>\AppData\Local\VirtualStore\Program Files\FieldWorks.

7.1 Error 1722

Under *very rare* occasions, the registration process for FwListEditor.exe fails and gives an Error 1722 message, causing the whole installation to roll back. This happens if something keeps c:\Program Files\Common Files\SIL out of the path. The registration fails if it cannot find the icu dlls. Most of these problems were related to an erroneous path with double \\. If you ever get this, before closing the Error 1722 dialog, do the following:

1. Open a DOS box on c:\Program Files\SIL\FieldWorks.
2. Type "FwListEditor.exe -regserver".
Result: Will probably list an error message about failing to find an icu dll.
3. If so, type "path" and look carefully at the path and correct or remove anything that causes this failure.
Tip: Right-click My Computer and choose Properties to get to the system environment variables. After they are changed, you need to open a new DOS box for them to take affect.
4. Once you fix the path, let the installation roll back and try again.
Result: It should work the second time.

This error will also occur if FwListEditor.exe is already in the installation folder before the installation begins. This indicates a preexisting version of FW was not correctly uninstalled.

7.2 Cannot start MSDE

On slower computers, it is possible the first time a FieldWorks application starts, it gives an error message that it cannot start SQL server. It asks if you want to retry. If you retry once or twice, it usually works. If not, use the db program to start and possibly initialize the database. If database files (.mdf/.ldf) are compressed, a different message comes up saying the files must be uncompressed. They need to be uncompressed for SQL Server to use them.

7.3 No databases to open

Under *very rare* cases, no databases are available to open if something went wrong during the database initialization phase. One problem that can cause this is having database files (.mdf/.ldf) compressed. They need to be uncompressed for SQL Server to use them. If you get this failure, try “db initialize” to make sure MSDE is initialized. If “db fwnames” still shows no attached databases, try attaching each database in the %ALLUSERSPROFILE%\Application Data\SIL\FieldWorks\Data directory using the db program. This usually helps FieldWorks work normally.

7.4 SIL Encoding Converter registration failure

Under *very rare* cases, some registry keys in HKEY_CLASSES_ROOT do not have write privileges. The normally should not happen because the registration is done as a final step of the installation process. If it fails in this way, the first time you try to access an encoding converter, the SilEncConverters30.dll program gives an error message listing the locked registry key when it tries to register itself. Many keys get set in this way, so you need to clear *all* of them before it registers properly. The best thing to do in the registry is to right-click HKEY_CLASSES_ROOT, choose Permissions, and allow Full Control for the Administrators.

7.5 Comodo and McAfee firewall conflicts

Some firewalls and protection software can interfere with installing SQL Server. One user had Comodo firewall installed and it prevented FieldWorks applications from starting saying it couldn't start the database. Another user had a McAfee firewall that caused the same problem. Once it was turned off, FieldWorks was able to get the database started, and from then on, it kept working with the firewall enabled. You may have to allow sqlservr.exe through the firewall in some cases. Flex may still complain, “The initial listener for this application could not be created, because the port is already taken. The program may not interact properly with other SIL FieldWorks suite programs.” Flex uses port 6000 to allow URLs to open Flex at a given location in the program. If a firewall blocks this port, Flex will give an error when it starts. To solve the problem the firewall needs to be set to allow access to port 6000.

It appears that if McAfee Security Center is installed, it should be disabled during the FieldWorks installation process. Otherwise it can block SQL Server from getting installed properly, and can get the SQL Server installation in a state that is hard to recover from.

With McAfee Security Center installed, Flex.exe had to be given full access to the Internet before it could be started without giving the “initial listener” warning. The

warning continued to appear when Flex.exe was limited to outbound only. Once Flex was installed and running Sqlserver.exe could be blocked from the Internet and it continued to work fine. It's unclear whether it will install and run initially without giving it full Internet permission.

Here are instructions for McAfee Security Center to give Flex.exe full control:

1. In McAfee Security Center program, click the arrow next to Internet & Network.
2. Click the arrow to configure
3. Click the Advanced button
4. In the left pane click Program Permissions.
5. In the right pane, click Add Allowed Program, then navigate to Flex.exe and click OK. This should add Flex.exe to the list and the status should be Full Access.

One user had installation failures due to port 6000 being used by Advanced Networking Services (hnm_svc.exe (*32)) which Dell pre-installs to provide access to Dell online support as well as Dell Remote Access to allow you to access your PC from a remote location to get files, etc. Once he disabled that service, he was able to install and run Flex. Command lines netstat -nab and netstat -nao can help to identify processes that are using port 6000.

7.6 Failure to uninstall

The FieldWorks master installers try to uninstall any older corporate releases of FieldWorks and SIL Encoding Converter programs prior to installing current versions. If another user installed an older version of SIL Encoding Converters program, that user needs to log on to uninstall the files. If that is not possible, use the following procedure to get rid of the older installation:

1. Run the setup.exe program from the root of the Freeware CD (or wherever) with the following command line options:
setup.exe -log:c:\setup.log
(You may need to prefix setup.exe with its drive and folder location.) This will run the master installer and create a log file of its activities in the file c:\setup.log.
2. As soon as you get the error message about the installation under another user's account, open up the log file (in Notepad), leaving the error message box running, so as to reduce the number of log messages after the desired one.
3. Near the bottom of the log file, you will see an entry stating: "Found registry key", followed by lines describing the application name and version number.
4. Run Regedit.exe, and navigate to
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Installer\UserData.
Navigate deeper according to the registry key reported in the log file in step 3. There will be four sections to this logged registry key. The first is a user ID code, the second will be 'Products', the third will be a coded ID for the installed product, and the fourth will be 'InstallProperties'. You can delete the coded installed product ID key (the third section) and its descendents: the id of the installed product, and any install properties.
5. In the C:\Program Files\Common Files folder, delete the folder SIL, if it exists.
6. In the C:\Program Files\SIL\FieldWorks folder, leave any subfolders/sub-directories in place, but if there are any files in that folder, delete them.

7.7 First time migration failure

If your installation sequence includes the installation of SQL Server 2005, and occasionally at other times, you will not be able to migrate (upgrade) older data until after you reboot the computer. Most users will not need to do this for a new installation, but if you install FW on a new computer and intend to restore your data from an older version on a different computer, you need to be aware of this.

The change to SQL Server 2005 Express solved most of these problems, but there are still a few cases where it requires rebooting. This occurs because the path to a SQL Server utility doesn't get fully registered until the machine is rebooted. This can also be caused by an incomplete installation of SQL Server 2005 Express. If rebooting doesn't help, contact flex_errors@sil.org.

7.8 Missing components

There are various ways users can get into a state where they try running FieldWorks without necessary components.

- First-time installations may fail if the user doesn't use the correct installer. If they use an installer that doesn't provide SQL Server 2005 Express, FieldWorks applications other than WorldPad will all fail. If they use an installer that is missing .NET 2.0, nothing will run. The missing components will need to be installed to make this work. This typically means getting a FieldWorks installer that contains the necessary data. The FieldWorks master installer (Setup.exe) should detect missing components and add them or tell you where to obtain them.
- Upgrade installations may also fail under some circumstances. For example, if a person deletes the FieldWorks directory including the MSSQL\$SILFW directory, there will be various problems due to SQL Server being missing. This will likely require manually uninstalling FieldWorks and the Microsoft SQL Server, then using an installer that includes SQL Server 2005 Express. In one case the user needed to use "db initialize" after the installation to get it to work.

7.9 Installation problem with 64-bit Vista

FieldWorks 5.4 and SIL Converters 3.0 may have installation problems on 64-bit Vista. We didn't realize until after the release that the SIL Converters programs were not configured to make them work with 64-bit Vista. One of these is EncConvertersAppDataMover30.exe, and this is used during installation of either package. Unfortunately, this usually breaks the installation (error is EncConvertersAppDataMover has stopped working) and may prevent a few final steps, such as registering the SIL Converters dll. This should be solved in the next release. In the meantime, if you have trouble, try opening Flex by right-clicking the icon and choosing Run as Administrator. Then go to Bulk Edit Entries, and in the Process tab click Setup and add a temporary converter. This should complete registration of SIL Converters. If you have any further problems, contact flexerrors@sil.org.

7.10 Other installation failures

If the installation process fails for any other reason, it is usually necessary to produce a log file of the installation to see what is going wrong. If it is not obvious from an

inspection of the log file, send this log file to LSDev Dallas for help in resolving the problem. There are several ways to produce a log file.

7.10.1 Log file from master installer setup.exe installer

When running the master installer setup.exe program, add the following command line parameter in a Cmd window:

```
-log:log-file-path-and-name
```

This produces a log file as specified.

7.10.2 Log file for *.msi file

When installing a *.msi file, run it from a command line with arguments to create a log file:

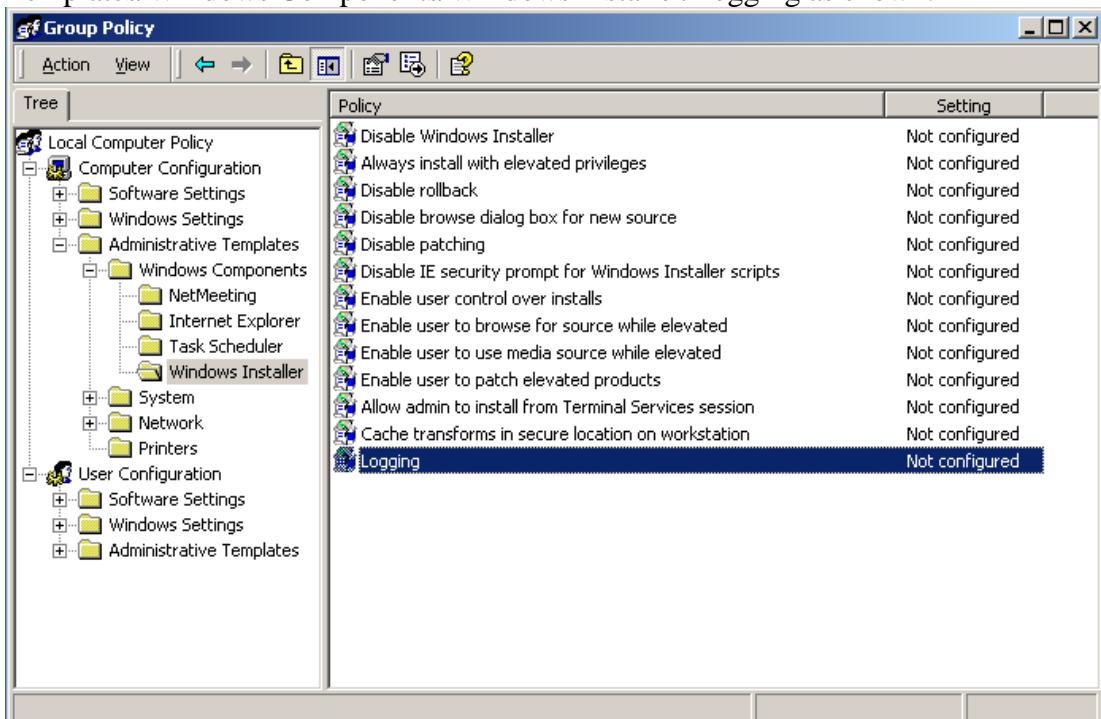
```
msiexec /i D:\FieldWorks\SetupFW.msi /l*v c:\SetupFW.log.
```

Set the input msi file path as needed. The log file will be in c:\SetupFW.log.

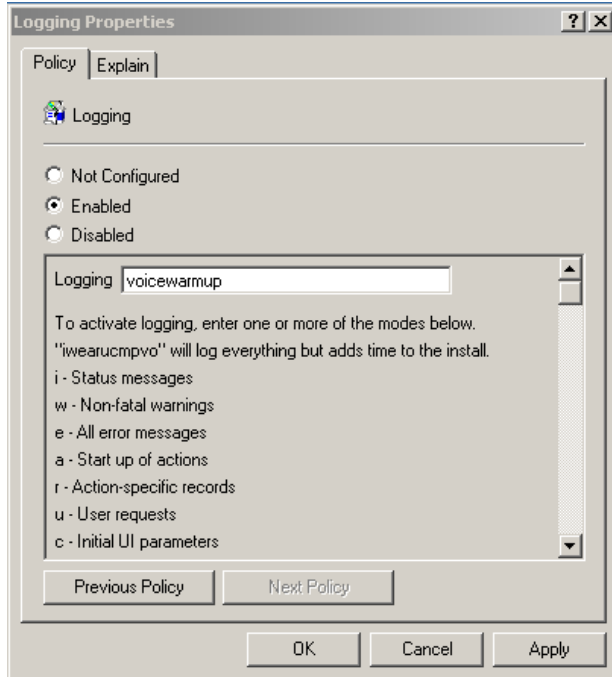
7.10.3 Log file for embedded installers

Where an installer installs embedded installations, to get these log files, make some temporary settings to capture them:

1. From Start Menu, use Run to run gpedit.msc.
2. Navigate to Local Computer Policy/Computer Configuration/Administrative Templates/Windows Components/Windows Installer/Logging as shown:



3. Double-click Logging and select it to enable Logging option "voicewarmup" as shown:



4. Press OK.
5. Open Windows Explorer, in the Address box type %TEMP%, and press Enter.
Result: This opens the folder where the log file appears when you run any Windows installer from now on.
Note: Log files have random names, so look for the date/time that matches when you ran the installer.
6. Allow the installer to run.
7. When done, reset the Logging Properties dialog back to the original settings.