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### PrimerPro Setup Tutorial

PrimerPro is a computer application designed to assist literacy personnel in the creation of scientifically designed primers, by capitalizing on the grammatical and phonological properties of these languages. The program and accompanying instructions help primer developers determine the teaching order of consonants, find buildable words for stories, check stories for untaught letters, and perform other key tasks in producing reading primers.

This tutorial is a step-by-step procedure on how to set up PrimerPro to assist you in producing a primer. The tutorial will walk through one scenario for using PrimerPro. Please note that there are other scenarios for using PrimerPro that are just as valid. Once you use this tutorial to learn PrimerPro, you should feel comfortable with how to set up PrimerPro in your situation. This tutorial assumes that PrimerPro has never been run on your computer before now.

You will also need a 4,000+ word list, in a Standard Format File or LIFT file, in UTF-8 format. This can be created using either Toolbox, FieldWorks or WeSay. You will also need a 4000+ words of edited text (so the spelling is correct!) in plain text files in UTF-8 format. You will also need the orthography statement or sketch for the language.

### Installation

The installation consists of one executable file: PrimerProSetup25.exe. This contains all the files necessary for running the application.

Below are the steps for installing PrimerPro.

1. Run PrimerProSetup271.exe by double-clicking on it.
2. Click **Next**.
3. Browse for the desired folder for installing the application. Then click Next.
4. Click **Next**.
5. Click **Install**.
6. Click **Finish**.
7. In **Windows Explorer**, navigate to the PrimerPro subfolder in the Documents folder. Create a new subfolder in the PrimerPro folder. You should give it the language name. This will also be your project name. This new folder will be your data folder for the project. PrimerPro will soon start putting info there.

### Starting PrimerPro

You can start the program by double-clicking on the **PrimerPro** icon on the desktop.

### Creating a New Project

The first thing you want to do is create a project. Below are the steps.

1. On the **File** menu, click **Create New Project**. The **Create New Project** dialog box appears.
2. In the **Project Name** box, enter the language name of the primer.
3. Click **OK**. The project has been created and is now the current, or active, project. An initial grapheme inventory has been created.

### Setup Folder Options

The data folder and the template folder should be the same folder with the project name as a subfolder under the PrimerPro folder. To verify that your data folder and template folder have been set up properly, do the following:

1. On the **Tools** menu, click **Options**, and then click the **Folder** tab. The Options dialog box appears, with the **Folder** tab selected.
2. Verify the **Data Folder** box is correct.

3. Verify the **Template Folder** box is correct.

#### Verify File Options

The current grapheme inventory file should be GraphemeInventory.xml in your data folder. The current sight words file should be SightWords.xml in your data folder. The current graphemes taught file should be GraphemeTaughtOrder.xml in your data folder. The current parts of speech file should be PSTable.xml in your data folder. To verify this, do the following.

1. In the **Options** dialog box, click the **File** tab. The **Options** dialog box appears, with the **File** tab selected. Verify the text boxes are correct. Now the current word list and current text data should be blank.

#### Verify Format Options

The default font should be Andika if you have the Andika font on your computer. Otherwise another font found on your computer will be displayed. The highlight color should be black. To verify this, do the following

1. In the **Options** dialog box, click the **Format** tab. The **Options** dialog box appears, with the **Format** tab selected.
2. To change the default font, click **Change Default Font**. The **Font** dialog box appears. Navigate to the desired **Font**, **Font style** and **Size**. Click **OK** when done.
3. To change the highlight color, click **Change Highlight Color**. The **Color** dialog box appears. In the **Basic colors** box, click the desired color. Click **OK** when done. The **Options** dialog box reappears with a sample of the desired color.

#### Setup View Options.

1. In the **Options** dialog box, click the **View** tab. The **Options** dialog box appears, with the **View** tab selected.
2. Select **English Gloss** or select **National Gloss** or both whatever is appropriate.
3. Select **Part of speech**.
4. Select other choices, as needed.

#### Setup SFM Options

If you are going to import a Standard Format Marker (SFM) wordlist file, you will need to indicate which field codes you are using in the wordlist file.

1. In the **Options** dialog box, click the **SFM** tab. The **Options** dialog box appears, with the **SFM** tab selected.
2. Do any of the following:
  - In the **Record Marker** box, enter the desired field marker. This is the field marker that marks the beginning of a record. The default is **lx**.
  - In the **Word Transcription** box, enter the desired field marker. The default is **lx**.
  - In the **English Gloss** box, enter the desired field marker. The default is **ge**.
  - In the **National Gloss** box, enter the desired field marker. The default is **gn**.
  - In the **Regional Gloss** box, enter the desired field marker. The default is **gr**.
  - In the **Parts of Speech** box, enter the desired field marker. The default is **ps**.
  - In the **Plural** box, enter the desired field marker. The default is **pl**.
  - In the **Root** box, enter the desired field marker. The default is **rt**.

#### Setup LIFT options

If you are going to import a LIFT (Lexicon Interchange Format) wordlist file, you will need to specify the language codes (2 or 3 characters) used by the LIFT wordlist file. For vernacular languages, it is usually the Ethnologue code.

1. In the **Options** dialog box, click the **Lift** tab. The **Options** dialog box appears, with the **Lift** tab

selected.

2. Do any of the following:

- In the **Vernacular** box, enter the desired language code used in the LIFT file to identify the vernacular language.
- In the **English Gloss** box, enter the desired language code used in the LIFT file to identify the English gloss. It is usually en.
- In the **National Gloss** box, enter the desired language code used in the LIFT file to identify the national gloss.
- In the **Regional Gloss** box, enter the desired language code used in the LIFT file to identify the regional gloss.

### Set up CV Options

These settings specify the symbols to be used when displaying the CV (consonant-vowel) pattern. Usually, you can just accept the default options. If you want to change them, consult the Help facility for more information.

### Set up Punctuation Options

These settings specify the symbols used for punctuation in the text data. The Ending Punctuation List is used for determining where sentences breaks occur. The General Punctuation List is used for determining what a word is. It will also determine where words breaks occur.

1. In the **Options** dialog box, click the **Punctuation** tab. The **Options** dialog box appears, with the **Punctuation** tab selected.

2. Do any of the following:

- In the **Ending punctuation list** box, enter the punctuation symbols as a string of symbols that can be used at the end of a sentence. The default is ".?!".
- In the **General punctuation list** box, enter the punctuation symbols as a string of symbols that can be used within a sentence. The default is " ;:-,".

### Setup Import Options

These settings specify parameters for importing word list and text data.

1. On the **Tools** menu, click **Options**, and then click the **Import** tab. The Options dialog box appears, with the **Import** tab selected.

2. Do any of the following:

- In the **Maximal size of graphemes** box, enter the largest number of characters a grapheme can have, for this language. The default is 4.
- In the **Characters to ignore** box, enter the characters that you want the import process to ignore for either the word list or the text data. The application will handle these characters as if they do not exist in the data. An example of items you want PrimerPro to ignore would be chapter and verse numbers in a book of the Bible.
- For the **Characters to replace** table, refer to the help facility.

3. Click **OK** when done.

Now you have completed setting up all the options settings.

### Initializing the Grapheme Inventory

1. On the **Tools** menu, point to **Grapheme Inventory**, point to **Initialize Grapheme Inventory**, and then click **From a word list** or **From a text data**. If you selected **From a word list**, The **Initialize Grapheme Inventory from the Word List** dialog box appears.

2. To select the word list, click **Browse**. Navigate and select the desired word list.

3. To put consonants in the inventory, click **Select consonants**. Select the desired consonants by adding

them to the **Selected Items** list from the **Available items** list. Click **OK** when done.

4. To put vowels in the inventory, click **Select vowels**. Select the desired vowels by adding them to the **Selected Items** list from the **Available items** list. Click **OK** when done.

5. To put tones in the inventory, click **Select tones**. Select the desired tones by adding them to the **Selected Items** list from the **Available items** list. Click **OK** when done.

6. To put multi-graphs in the inventory, click **Select multi-graphs**. Select the desired multi-graphs by adding them to the **Selected Items** list from the **Available items** list. Click **OK** when done.

7. Click **OK**.

### Completing the Grapheme Inventory

You have already listed many graphemes which occur in the language. Now you are ready to complete the Grapheme Inventory list, with any symbols whose features need to be updated. You can now update the consonant list by adding the missing consonants (the ones that were not covered by the initialization process).

1. On the **Tools** menu, point to **Grapheme Inventory**, and then click **Update Consonant Inventory**. The **Update Consonant Inventory** dialog box appears.

2. To add a new consonant to the list, click **Add**. The **Update Consonant Inventory** dialog box reappears with empty fields. Enter the desired grapheme and its appropriate features. Click **Save**. Then click **OK**. The **Update Consonant Inventory** dialog box reappears.

3. Click **Previous** to display the previous consonant in the list. Click **Next** to display the next consonant in the list.

4. To find a given consonant, in the **Find** text box, type the grapheme of the consonant. Then click **Find**. The consonant is displayed. If the application cannot find the grapheme, it means the grapheme is not in the consonant list and will need to be added.

5. If you want to change the features of the displayed consonant, just make the appropriate changes and then click **Save**.

6. Consonant combination feature is for consonant clusters that need to be taught. When you select **Consonant Combination**, all the other features become unavailable. Enter the graphemes of the consonant cluster in the adjacent text box, with one grapheme per line. Click **Save** to save the consonant.

7. When done, click **Exit**.

Second you will need to update the vowel list by adding the missing vowels (the ones that were not covered by the initialization process).

1. On the **Tools** menu, point to **Grapheme Inventory**, and then click **Update Vowel Inventory**. The **Update Vowel Inventory** dialog box appears. The first vowel of the list is displayed, if any.

2. To add a new vowel to the list, click **Add**. The **Update Vowel Inventory** dialog box reappears with empty fields. Enter the desired grapheme and its appropriate features. Click **Save**. Then click **OK**. The **Update Vowel Inventory** dialog box reappears.

3. Click **Previous** to display the previous vowel in the list. Click **Next** to display the next vowel in the list.

4. To find a given vowel, in the **Find** text box, type the grapheme of the vowel. Then click **Find**. The vowel is displayed. If the application cannot find the grapheme, it means the grapheme is not in the vowel list and will need to be added.

5. If you want to change the features of the displayed vowel, just make the appropriate changes and then click **Save**.

6. Diphthong feature is for vowel diphthongs or combinations that need to be taught. When you select **Diphthong**, all the other features become unavailable. Enter the graphemes of the vowel diphthong in the text box below, with one grapheme per line. Click **Save** to save the vowel

7. When done, click **Exit**.

Third, if you have a tonal language where tone is being marked, you will need to add all the tonal graphemes to the tone list.

1. On the **Tools** menu, point to **Grapheme Inventory**, and then click **Update Tone Inventory**.

The **Update Tone Inventory** dialog box appears. The first tone of the list is displayed.

2. To add a new tone to the list, click **Add**. The **Update Tone Inventory** dialog box reappears with empty fields. Enter the desired grapheme and its appropriate features. Click **Save**. Then click **OK**. The **Update Tone Inventory** dialog box reappears.

3. Click **Previous** to display the previous tone in the list. Click **Next** to display the next tone in the list.

4. To find a given tone, in the **Find** text box, type the grapheme of the tone. Then click **Find**. The tone is displayed. If the application cannot find the grapheme, it means the grapheme is not in the tone list and will need to be added.

5. If you want to change the features of the displayed tone, just make the appropriate changes and then click **Save**.

6. When done, click **Exit**.

For more information on the grapheme inventory, refer to the help facility.

### Verifying the Grapheme Inventory

Next you will want to verify that Grapheme Inventory has been correctly setup. First you should display the Grapheme Inventory to verify that all the graphemes are there

- On the **View** menu, click **Grapheme Inventory**. On the **Format** Menu, set the **Word Wrap**. All of the consonants, the vowels and the tones from the current grapheme inventory, are displayed in the active document.

Second you should display the appropriate consonant charts to verify the consonants have the correct features.

1. On **Search** menu, click **Consonant Chart Search**.

The **Consonant Chart Search** dialog box appears.

2. In the **Consonant Chart Search** dialog box, do any of the following:

- Select **Palatalized**, if you want to display the palatalized consonant chart.
- Select **Labialized**, if you want to display the labialized consonant chart.
- Select **Velarized**, if you want to display the velarized consonant chart.
- Select **Prenasalized**, if you want to display the prenasalized consonant chart.
- Select **Syllabic**, if you want to display the syllabic consonant chart.
- Select **Aspirated**, if you want to display the aspirated consonant chart.
- Select **Long**, if you want to display the long consonant chart.
- Select **Glottalized**, if you want to display the glottalized consonant chart.
- Select **Combination**, if you want to display the combination consonant chart.

If you choose none of them (the default choice), then all simple consonants are displayed.

3. Click **OK**.

Third you should display the **Vowel Chart** to verify the vowels have the correct features.

1. On **Search** menu, click **Vowel Chart Search**. The **Vowel Chart Search** dialog box appears.

2. In the **Vowel Chart Search** dialog box, do any of the following:

- Select **Nasal vowels**, if you want to display the nasal vowel chart.
- Select **Long vowels**, if you want to display the long vowel chart.
- Select **Voiceless vowel**, if you want to display the voiceless vowel chart.
- Select **Diphthongs**, if you want to display the diphthong chart.

If you choose none of them (the default choice), then all the short oral vowels are displayed.

3. Click **OK**.

Fourth you should display the **Tone Chart** to verify the tone list.

- On **Search** menu, click **Tone Chart Search**. The Tone Chart is displayed in the currently active document.

If you need to make any changes to the grapheme inventory, you should do so and then go through the verification process again. This is an iterant process.

### Importing Word List

Now you are ready to import the wordlist. The word list file needs to be a Standard Format Marker (SFM) file or a Lift file. It must be a UTF-8 file as well. If it is an SFM, verify that you have the correct field codes in the option settings to match the word list. If it is a LIFT file, make sure you have the correct language codes in the option settings to match the word list.

1. To import a wordlist file, do one of the following.

- On the **Tools** menu, point to **Word List**, and point to **Import** and click **Standard Format Lexicon**. This will open a Standard Format Marker (SFM) file.
- On the **Tools** menu, point to **Word List**, and point to **Import** and click **LIFT Lexicon**. This will open a Lexicon Interchange Format (LIFT) file.  
The **Open** dialog box appears.

2. Navigate to and select the desired file, and then click **Open**.

The wordlist is loaded.

3. Click **OK** after wordlist has been imported.

Now to verify the word list has been imported properly, display a listing of the current wordlist.

- On the **View** menu, click **Word List**. A listing of the current wordlist, along with a count, is displayed in the active document. Information about each word is displayed with the word.

You also might want to check to verify that you do not have any unwanted characters in the word list. If so, you may need to clean up the word list.

- On the **Tools** menu, point to **Word List**, and then click **Check against Grapheme Inventory**. PrimerPro will display a list of any characters which are in the word list but are not in grapheme inventory.

### Importing the Text Data

Now you are ready to import the text data. The text data must be a UTF-8 plain text.

1. On the **Tools** menu, point to **Text Data**, and then click **Import**. The **Open** dialog box appears.
2. Navigate to and select the desired file, and then click **Open**. The text data is loaded.
3. Click **OK** after text data has been imported.

If you have several text files, you need to merge them.

1. On the **Tools** menu, point to **Text Data**, and then click **Merge**. The **Open** dialog box appears.
2. Navigate to and select the desired file, and then click **Open**. The selected text data is appended to the current text data.
3. Click OK after text data has been merged with current text data. After merging all the files, you need to save the new file you've created.
4. On the **Tools** menu, point to **Text Data**, and then click **Export**. The **Save As** dialog box appears.
5. Navigate to the desired folder. In the **File name** text box, enter the desired file name for the new text data file, and then click **Save**. The current text data is saved to the selected file as a UTF-8 plain text file. This becomes the new current text data.
6. Click **OK** after exporting.

Now to verify the text data has been imported properly, display a listing of the current text data.

- On the **View** menu, click **Text Data**. The text of the current text data, along with the paragraph count, the sentence count and the word count, is displayed in the currently active document.

You also might want to check to verify that you do not have any unwanted characters in the text data. If so, you may need to clean up the text data.

- On the **Tools** menu, point to Text Data, and then click **Check against Grapheme Inventory**.

PrimerPro will display a list of any characters which are in the text data but are not in grapheme inventory.

### Generating Vowel Report

The Vowel Report will show you all the vowels to be taught and their co-occurrences. This is useful for verifying you have all the vowels required to be taught.

1. To generate a vowel report, do the following.

- On the **Report** menu, click **Generate Vowel Report**. The Vowel Report is displayed in a new active document named Vowel Report.

2. To save the report as an RTF file, do one of the following.

- Press .
- On the File menu, click **Save**.
- On the File menu, click **Save As**. The **Save As** dialog box appears. In the **Save in** list, navigate to the appropriate folder. In the **File name** box, type the appropriate name, for example, VowelReport.rtf. Click **Save**. Then you can print the report or display it in a word processor.

3. Using the Vowel Report, review the vowel charts to verify the vowels have been set up correctly. If not, make the necessary changes to the current grapheme inventory. Using the Vowel Report, review the vowel co-occurrence chart. List any vowel sequences which are very common. The common sequences, two contiguous vowels, will need to be taught. They will need to be added in the current grapheme inventory as diphthongs.

4. To make changes to current grapheme inventory,

- On the **Tools** menu, point to **Grapheme Inventory**, and then click **Update Vowel Inventory**. The **Update Vowel Inventory** dialog box appears. The first vowel of the list is displayed, if any.

5. Then do any of the following:

- To navigate through the list, use **Previous** and **Next**. **Previous** will display the previous vowel in the list. **Next** will display the next vowel in the list.
- To find a given vowel, in the **Find** text box, type the grapheme of the vowel. Then click **Find**. The vowel is displayed.
- To add a new vowel to the list, click **Add**. The **Update Vowel Inventory** dialog box reappears with empty fields. Enter the desired grapheme and its appropriate features. Click **Save**. Then click **OK**. The **Update Vowel Inventory** dialog box reappears.
- To change the features of the displayed vowel, set the appropriate features. Then click **Save**.
- To delete the displayed vowel from the current grapheme inventory, click **Delete**.

6. When done, click **Exit**.

7. Rerun the vowel report to verify all the necessary changes have been properly entered. Whenever you update the grapheme inventory, you will need to re-import the word list and text data. Diphthong feature is for vowel diphthongs that need to be taught. When you select **Diphthong**, all the other features become unavailable. Enter the graphemes of the vowel diphthong in the text box below, with one grapheme per line. Then click **Save**.

## Generating Consonant Report

The Consonant Report will show you all the consonants to be taught and their co-occurrences. This is useful for verifying you have all the consonants required to be taught.

1. To generate a consonant report, do the following.

- On the **Report** menu, click **Generate Consonant Report**. The Consonant Report is displayed in a new active document named ConsonantReport.

2. To save the report as an RTF file, do one of the following.

- Press .
- On the **File** menu, click **Save**.
- On the **File** menu, click **Save As**. The **Save As** dialog box appears. In the **Save in** list, navigate to the appropriate folder. In the File name box, type the appropriate name, for example, ConsonantReport.rtf. Click **Save**. Then you can print the report or display it in a word processor.

3. Using the Consonant Report, review the consonant charts to verify the consonants have been set up correctly. If not, make the necessary changes to the current grapheme inventory.

Using the Consonant Report, review the nasal co-occurrence chart. If you have syllabic nasals followed by a consonant, they will need to be taught differently from pre-nasalized consonants. Generally speaking, for a nasal followed by a consonant, if the point of articulation is the same, this combination is a pre-nasalized consonant (e.g. ). Otherwise it is a syllabic nasal followed by a consonant (e.g. ). If a nasal followed by another identical nasal occurs (e.g. ) in the language, then the first nasal is syllabic.

Using the Consonant Report, review the consonant co-occurrence chart. If other consonant combinations appear, consider whether a digraph (this may include labialized, palatalized or aspirated consonants) has been overlooked and needs to be added to your grapheme inventory. Check with your literacy consultant if you find significant irregularities.

4. To make changes to current grapheme inventory, do the following.

- On the **Tools** menu, point to **Grapheme Inventory**, and then click **Update Consonant Inventory**. The **Update Consonant Inventory** dialog box appears. The first consonant of the list is displayed, if any.

5. Then do any of the following:

- To navigate through the list, use **Previous** and **Next**. **Previous** will display the previous consonant in the list. **Next** will display the next consonant in the list.
- To find a given consonant, in the **Find** text box, type the grapheme of the consonant Then click **Find**. The consonant is displayed.
- To add a new consonant to the list, click **Add**. The **Update Consonant Inventory** dialog box reappears with empty fields. Enter the desired grapheme and its appropriate features. Click **Save**. Then click **OK**. The **Update Consonant Inventory** dialog box reappears.
- To change the features of the displayed consonant, set the appropriate features. Then click **Save**.
- To delete the displayed consonant from the current grapheme inventory, click **Delete**.

6. When done, click **Exit**.

7. Rerun the consonant report to verify all the necessary changes have been properly entered.

Whenever you update the grapheme inventory, you will need to re-import the word list and text data.

Consonant combination feature is for consonant clusters that need to be taught. When you select **Consonant Combination**, all the other features become unavailable. Enter the graphemes of the



consonant cluster in the adjacent text box, with one grapheme per line. Then click **Save**.

### Determining Grapheme Taught Order

To determine the suggested Grapheme Taught Order, generate a Primer Progression Report. This report will display four searches: a grapheme frequency count on the word list, a recommended consonant teaching order based upon the word list, a grapheme frequency count on the text data and a recommended consonant teaching order based upon the text data.

1. To generate a primer progression report, do the following.

- On the **Report** menu, click **Generate Primer Progression Report**. The Primer Progression Report is displayed in a new active document named PrimerProgressionReport.

2. To save the report as an RTF file, do one of the following.

- Press .
- On the File menu, click **Save**.
- On the File menu, click **Save As**. The **Save As** dialog box appears. In the **Save in** list, navigate to the appropriate folder. In the **File name** box, type the appropriate name, for example, PrimerProgressionReport.rtf. Click **Save**.

Then you can print the report or display it in a word processor.

3. This report will display the suggested consonant teaching orders and the frequency counts from the word list and from the current text data. Using this report as input, draft a teaching order for the consonants.

4. Modify the teaching order with the following additions or considerations:

- Modify the order, if necessary, based on contrastive appearance of graphemes.
- Add in the frequent vowel diphthongs you have identified in the grapheme inventory to the teaching order, such as and .
- Concerning modified consonants (e.g. labialized, palatalized and aspirated), in the first lesson where you teach the modification, you should include the most frequent used form. Verify that it is after the corresponding plain consonant (e.g. should be taught after ). Then in the second lesson for the modification, you should teach two other modified consonants. Then in the third lesson for the modification, you should teach two or three other modified consonants. After the third lesson, consider the modification taught.
- Concerning pre-nasalized consonants, do not teach and in the same lesson. You will teach them as separate modifications.
- Add in the syllabic nasals you have identified that need to be taught to the teaching order.

5. Enter the teaching order onto the Primer Progression Chart.

### Setup Conclusion

Now you have completed the setup. To exit PrimerPro, do the following.

- On the **File** menu, click **Exit**.

PrimerPro will remember the last current project and all its option settings. The next time you start PrimerPro, the project will be selected with all its options setting. The associated word list file and text date file will be automatically imported.