

Smithsonian FIMS and Geneious LIMS Training

Session 2 - July 13, 2016

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Session 2 Outline

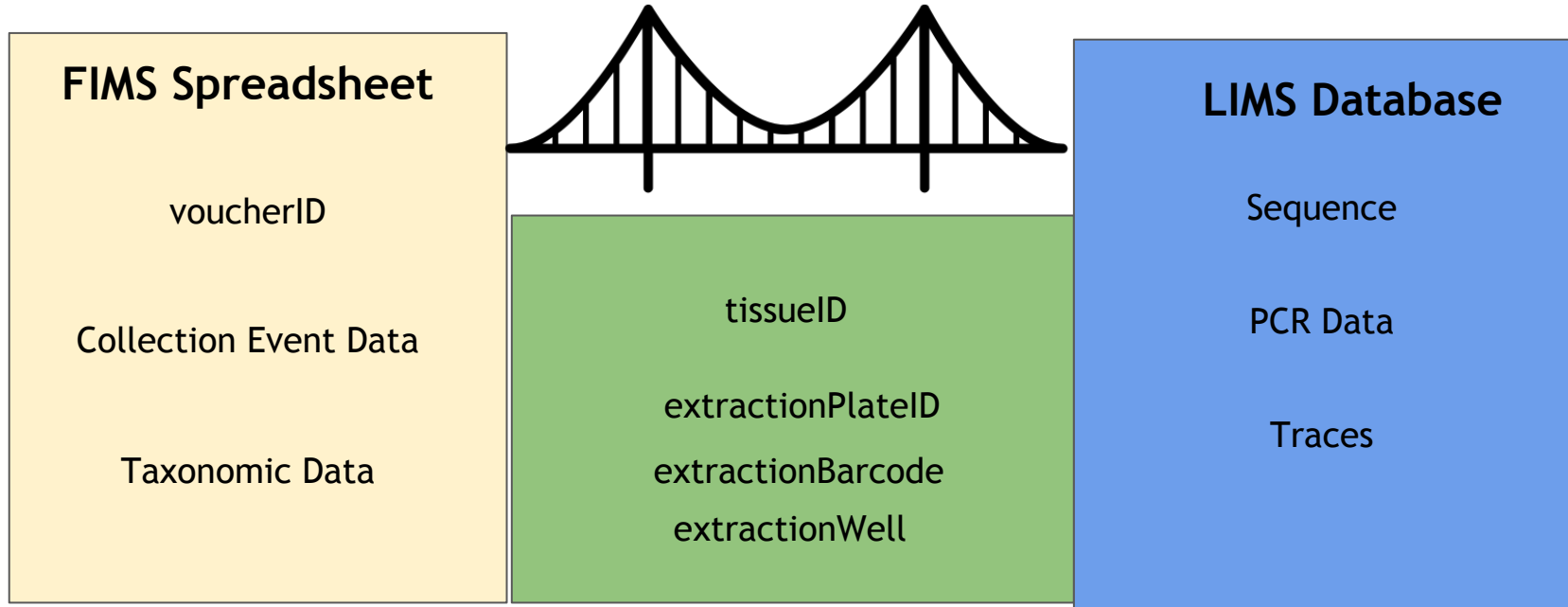
- Biocode LIMS Login
- FIMS and LIMS connections
- Naming conventions
- Generating extraction plates
- Searching, ID pieces,
- Generating PCR plates → primers, protocols
- Uploading and scoring gel images

<http://sibarcodenetwork.readthedocs.io/en/latest/>

Exercise 1: Creating your custom FIMS spreadsheet

- Go to <https://github.com/SmithsonianWorkshops/GeneiousLIMS>, and navigate to "Week 2" -> "Exercises".
- Download your pre-filled FIMS spreadsheet and plate scan (by selecting each file and clicking "Raw").
- Follow instructions to bring in extraction barcodes from plate scan.
- Save spreadsheet as old version of Excel (.xls)

Bridge between Specimen and Sequence Data



Login window

Connection Name:

Connection Method:

Field Database Connection:

Choose the location of your excel file.
The first row should be column headers, and it should have at least a tissue and specimen column.

Excel file location:

Tissue ID field:

Specimen ID field: ☐ Specimen photos on Flickr

☒ The FIMS database contains plate information

Plate name field:

Well field:

Specify your taxonomy fields, in order of highest to lowest

<input type="text" value="kingdom"/>	<input type="button" value="+"/> <input type="button" value="-"/>
<input type="text" value="phylum"/>	<input type="button" value="+"/> <input type="button" value="-"/>
<input type="text" value="class"/>	<input type="button" value="+"/> <input type="button" value="-"/>
<input type="text" value="order"/>	<input type="button" value="+"/> <input type="button" value="-"/>
<input type="text" value="family"/>	<input type="button" value="+"/> <input type="button" value="-"/>
<input type="text" value="genus"/>	<input type="button" value="+"/> <input type="button" value="-"/>
<input type="text" value="scientificName"/>	<input type="button" value="+"/> <input type="button" value="-"/>

Exercise 2: Connecting to Biocode Plugin

Login to Biocode LIMS using the following LIMS DB Info:

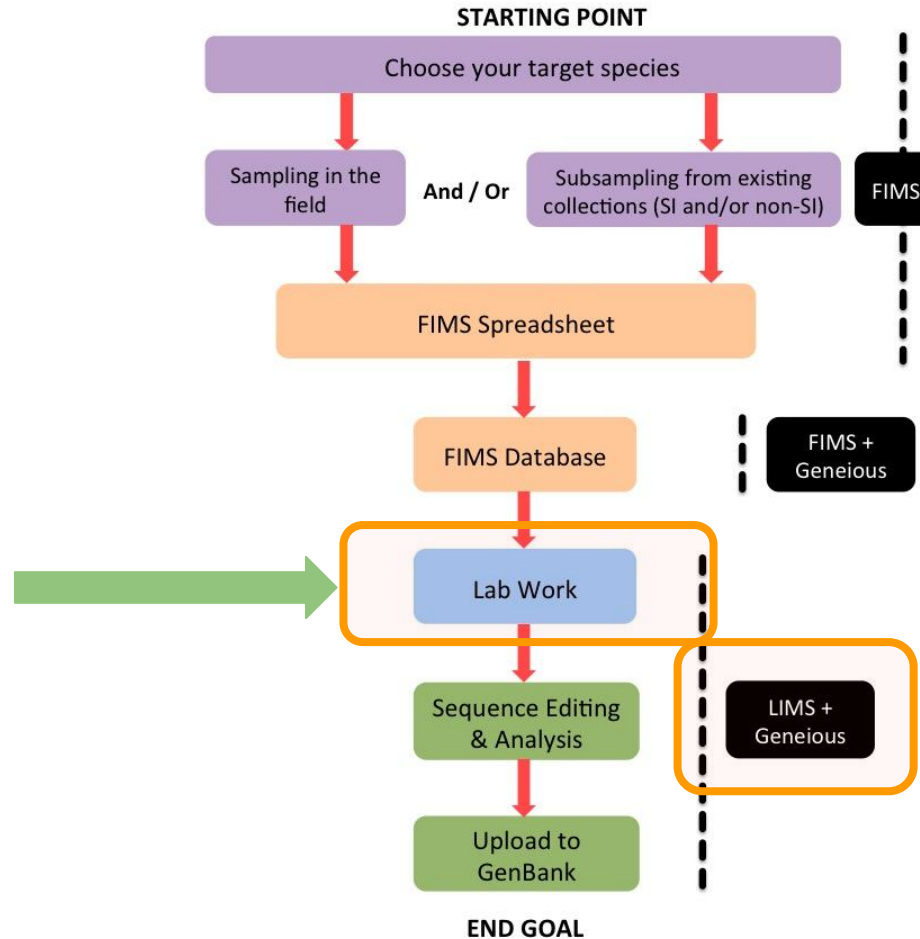
Server Address: db.bwplims.info

Database Name: si_barcode_training

Username: si_training

Password: Sm!thsonian

Overview of SI Barcoding Pipeline



Follow along at the SI Barcode Network documentation page on : Generating Extraction plates

http://sibarcodenetwork.readthedocs.io/en/latest/extraction_plates.html

Exercise 3:

Create an extraction plate.

- Use Bulk Edit to add and create the relevant IDs
- Use Edit All Wells to add specifics about the extraction process
- Save your plate
- Search for your plate

Follow along at the SI Barcode Network documentation page on : Generating PCR plates

http://sibarcodenetwork.readthedocs.io/en/latest/pcr_plates.html

Exercise 4:

Import the folder(s) of primers provided on github

Create two primers (one forward, one reverse)

Create a PCR plate (Remember: from your existing Extraction Plate)

Choose your PCR conditions

Once saved, search for your plate

Exercise 5: Uploading and Scoring gel

Find your PCR plate

Upload the gel image to your PCR plate

Assign the correct wells numbers

Automatically score the plate

Toggle display options so you can see the gel and color code the wells