# Appendix A

# EXPERIMENT GUIDES

## A.1 Subject Expert 1

**T1. Setting-up the environment.**

1. Start the NTK.

2. Configure the Registry Properties: Open Preferences → Oyster Storage Preference and configure it with the following properties:

   - Super Node IP: ServerIP (provided at the experiment)
   - Push Node IP: blank (default)
   - Read Ontologies Locally: checked

3. Start the Registry: Either from the Registry menu or by clicking the Registry icon on the toolbar. Note that the icon shape and the message on the Registry menu changes when the registry is running

4. Identify to the system: Open Preferences → Collaborative Development Preference, go to the Register section and provide:

   - Your first name
   - Your last name
   - Choose your role
   - Click Register

5. Create a new Ontology Development Project with the following properties:

   - Ontology Language: OWL
   - Datamodel Type: CollaborationServer
     - Host: ServerIP (provided at the experiment)
     - Port: 8267 (default)

6. Open existing ontology species_v1.0_model.owl into the project by selecting "Add Ontology To Project" in the project context menu.

**T2. Change Proposals.**

1. Start logging the ontology: Right-click the ontology and select "Log Changes"

2. Add Individual 31005_10000 (Species)

3. Add Individual 31005_10001 (Species)

4. Add Individual 31005_10000 DataProperty hasCodeAlpha3 value: DCR. Type: string

5. Add Individual 31005_10000 DataProperty hasID value: 10000. Type: string

6. Add Individual 31005_10000 DataProperty hasMeta value: 31005. Type: string

7. Add Individual 31005_10000 DataProperty hasNameEN value: Yellow-nosed albat. Type: string

8. Add Individual 31005_10000 DataProperty hasNameScientific value: Diomedea chlororhynchos. Type: string

9. Add Individual 31005_10001 DataProperty hasCodeAlpha3 value: PDM. Type: string

10. Add Individual 31005_10001 DataProperty hasID value: 10001. Type: string

11. Add Individual 31005_10000 DataProperty hasMeta value: 31005. Type: string

12. Add Individual 31005_10001 DataProperty hasNameEN value: Great-winged petre. Type: string

13. Add Individual 31005_10001 DataProperty hasNameScientific value: Pterodroma wrong macroptera. Type: string

14. Add Root Class Speciation

15. Add Individual Allopatric (Speciation)

16. Add Individual Peripatric (Speciation)

17. Add Individual ParapatricWrong (Speciation)

18. Add DataProperty hasSpeciation (Species)

**T3. Analysis of the changes/actions.** To see the changes information, open the view "Change Log View". Read and comment. To see the workflow actions, open the view "Draft View". Read and comment.

**T4. Submit your changes to be approved.** From the "Draft View", select them and click submit to be approved.

**Wait for Validator to finish task T2.**

**T5. Delete the rejected changes.** From the "Draft View", select them and click delete button.

**T6. Submit change to be deleted.** Open "Approved View" and submit the following change to be deleted:

- DataProperty hasSpeciation (Species)
    - Change Type: AddDataProperty
    - Related Entity: hasSpeciation
    - Author: SE1

## A.2 Subject Expert 2

**T1. Setting-up the environment.**

1. Start the NTK.

2. Configure the Registry Properties: Open Preferences → Oyster Storage Preference and configure it with the following properties:
    - Super Node IP: ServerIP (provided at the experiment)
    - Push Node IP: blank (default)
    - Read Ontologies Locally: checked

3. Start the Registry: Either from the Registry menu or by clicking the Registry icon on the toolbar. Note that the icon shape and the message on the Registry menu changes when the registry is running

4. Identify to the system: Open Preferences → Collaborative Development Preference, go to the Register section and provide:
    - Your first name
    - Your last name
    - Choose your role
    - Click Register

5. Create a new Ontology Development Project with the following properties:
    - Ontology Language: OWL
    - Datamodel Type: CollaborationServer
        - Host: ServerIP (provided at the experiment)
        - Port: 8267 (default)

6. Open existing ontology species_v1.0_model.owl into the project by selecting "Add Ontology To Project" in the project context menu.

**T2. Change Proposals.**

1. Start logging the ontology: Right-click the ontology and select "Log Changes"

2. Add SubClass genus of biological_entity. Right Click biological_entity and add Class genus.

3. Add Root Class Person

4. Add DataProperty name (Person)

5. Add ObjectProperty hasScientificNameAuthor

6. Add ObjectProperty domain (hasScientificNameAuthor,Species)

7. Add ObjectProperty range (hasScientificNameAuthor,Person)

8. Add Root Class Category

9. Add DataProperty description (Category)

10. Add Individual Extinct (Category)

11. Add Individual Endangered (Category)

12. Add Individual Extint DataPropertyValue (description, the last remaining member of the species has died, string,-)

13. Add ObjectProperty hasCategory.

14. Add ObjectPropertyRange (hasCategory,Category)

15. Add ObjectPropertyDomain (hasCategory,Species)

**Wait for SE1 to finish task T2.**

16. Add Species Class Super Restriction (AT_LEAST/MIN, 1, hasScientificNameAuthor, -)

17. Add Species Class Super Restriction (EXACTLY/CARD, 1, hasCategory, Thing)

18. Add Species Class Super Restriction (HAS_VALUE, hasMeta, "31005")

**T3. Analysis of the changes/actions.** To see the changes information, open the view "Change Log View". Read and comment. To see the workflow actions, open the view "Draft View". Read and comment.

**T4. Submit your changes to be approved.** From the "Draft View", select them and click submit to be approved.

**Wait for Validator to finish task T2.**

**T5. Delete the rejected changes.** From the "Draft View", select them and click delete button.

**T6. Submit change to be deleted.** Open "Approved View" and submit the following change to be deleted:

- Individual Extint DataPropertyValue (description, the last remaining member of the species has died, string, -)

    – Change Type: AddIndividualDataProperty
    – Related Entity: Extint
    – Author: SE2

## A.3  Validator 1

**T1. Setting-up the environment.**

1. Start the NTK.

2. Configure the Registry Properties: Open Preferences → Oyster Storage Preference and configure it with the following properties:

    - Super Node IP: ServerIP (provided at the experiment)
    - Push Node IP: blank (default)
    - Read Ontologies Locally: checked

3. Start the Registry: Either from the Registry menu or by clicking the Registry icon on the toolbar. Note that the icon shape and the message on the Registry menu changes when the registry is running

4. Identify to the system: Open Preferences → Collaborative Development Preference, go to the Register section and provide:

    - Your first name
    - Your last name
    - Choose your role
    - Click Register

5. Create a new Ontology Development Project with the following properties:

    - Ontology Language: OWL
    - Datamodel Type: CollaborationServer
        – Host: ServerIP (provided at the experiment)
        – Port: 8267 (default)

6. Open existing ontology species_v1.0_model.owl into the project by selecting "Add Ontology To Project" in the project context menu.

**T2. Approve/Reject Changes**

1. Start logging the ontology: Right-click the ontology and select "Log Changes"
   **Wait for SEs finish task T4.**

2. Open "To Be Approved view" and analyze changes from SubjectExperts. Approve all except the following (reject them):
   - Individual 31005_10001 DataProperty hasNameScientific value: Pterodroma wrong macroptera.
     – Change Type: AddIndividualDataProperty.
     – Related Entity: 31005_10001
     – Author: SE1
   - Individual ParapatricWrong
     – Change Type: AddIndividual
     – Related Entity: Speciation
     – Author: SE1
   - Species Class Super Restriction (EXACTLY/CARD, 1, hasCategory, -)
     – Change Type: AddSubClassOf
     – Related Entity: Species
     – Author: SE2
   - SubClass genus of biological_entity.
     – Change Type: AddSubClassOf
     – Related Entity: genus
     – Author: SE2

   **Wait for SEs finish task T6.**

**T3. Other Activities of the Collaborative Editorial Workflow**

1. Open "To Be Deleted View" and reject back to Approved the change:
   - DataProperty hasSpeciation (Species):
     – Change Type: AddDataProperty
     – Related Entity: hasSpeciation
     – Author: SE1

2. From "To Be Deleted View", delete permanently the change:
   - Individual Extint DataPropertyValue (description, the last remaining member of the species has died, string,-)
     – Change Type: AddIndividualDataProperty
     – Related Entity: Extint
     – Author: SE2

**Imagine there is another validator, then do:**

3. Open "Approved View" and (i.e. Validator1) and reject back to be approved change:
   - Species Class Super Restriction (HAS_VALUE, hasMeta, "31005").
     - Change Type: AddSubClassOf
     - Related Entity: Species.
     - Author: SE2

4. Open "ToBeApproved View" and (i.e. Validator2) approve the pending change.