Scheduling using gOntt

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What is Scheduling?

Scheduling

Definition

Scheduling refers to the activity of identifying the different activities and processes to be performed during the ontology development, their arrangement, and the time and resources needed for their completion.

Goal

The scheduling activity establishes a concrete programme or schedule to guide the ontology network development; it includes processes and activities, the order in which these are carried out as well as time, human resources restrictions and assignments.

Input

Ontology Requirements Specification Document (ORSD).

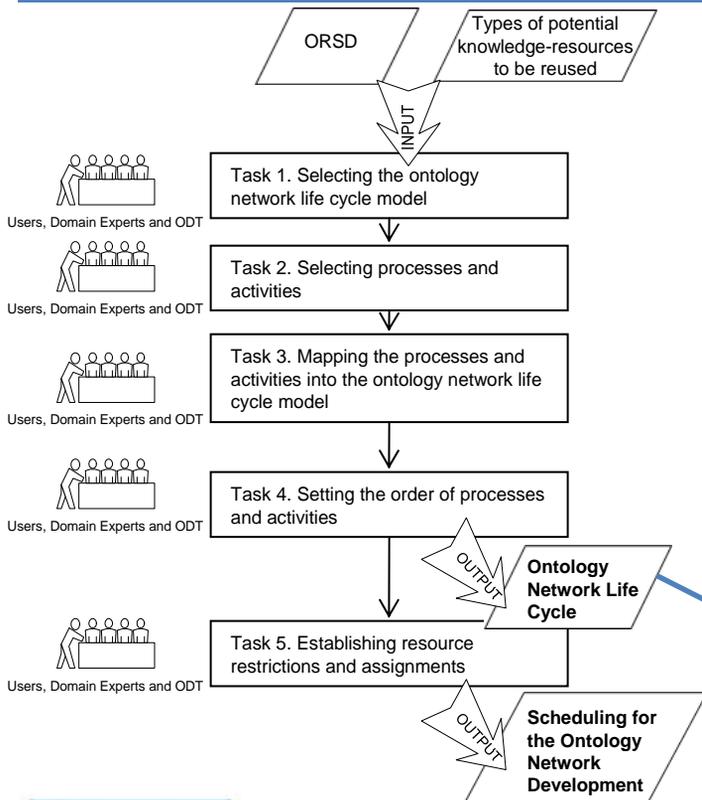**Output**

Schedule for the ontology network development.

Who

Software developers and ontology practitioners, who form the ontology development team (ODT), in collaboration with users and domain experts.

When

This activity must be carried out after the ontology requirements specification activity.

What is the process?

ORSD

Types of potential knowledge-resources to be reused

INPUT

Users, Domain Experts and ODT
Task 1. Selecting the ontology network life cycle model

Users, Domain Experts and ODT
Task 2. Selecting processes and activities

Users, Domain Experts and ODT
Task 3. Mapping the processes and activities into the ontology network life cycle model

Users, Domain Experts and ODT
Task 4. Setting the order of processes and activities

OUTPUT
Ontology Network Life Cycle

Users, Domain Experts and ODT
Task 5. Establishing resource restrictions and assignments

OUTPUT
Scheduling for the Ontology Network Development

Why Scheduling is needed?

To properly manage a development project, it is crucial to have knowledge of the entire development life cycle. In this regard, planning and scheduling are related activities that should be carried out before starting any project. The project plan defines the tasks to be done and the human resources to perform the project work. The project schedule is a calendar that links the tasks to be done with the resources to support their performance.

Ontology Network Life Cycle

Scheduling includes the establishment of the **ontology network life cycle**, that is, the specific ordered sequence of processes and activities that ontology developers have to carry out during the life of the ontology network.
Processes and Activities are defined in Chapter 3.

Ontology Network Life Cycle Models

The **ontology network life cycle model** defines in an abstract way how to develop an ontology network project.

The *waterfall ontology model* represents the stages of the ontology development as a waterfall (a concrete stage must be completed before the following stage begins and backtracking is permitted from the maintenance phase to the phase after the requirements one).
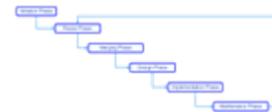
The *iterative-incremental model* organizes the ontology development in a set of iterations (or short mini-projects with a fixed duration). Each iteration is scheduled as a single ontology project using a waterfall model.

The **Gantt chart** illustrates the start and finish dates of the processes and activities involved in the project, as well as dependencies among them.

gOntt: a Tool for Scheduling Ontology Development Projects

gOntt is a NeOn Toolkit plug-in that provides support to ontology developers

(a) to decide which ontology life cycle model is the most appropriate for building their ontologies (e.g., waterfall, iterative-incremental), which processes and activities should be carried out and in which order (e.g., specify ontology requirements before re-engineering a knowledge-aware resource into an ontology) and

(b) to create a graphical representation in the form of a Gantt chart with the processes and activities needed, including time restrictions between them. Schedules for ontology development projects can be created either from scratch or in a guided way.

Additionally, gOntt provides help for ontology developers during the ontology project execution by means of

❑ presenting a filling card that includes the process or activity definition, its goal, inputs and outputs, who carries it out, and when it should be done,

❑ presenting a workflow that describes how the process or the activity should be done, with its inputs, outputs, tasks and actors involved, etc., and

❑ providing a direct access to NeOn Toolkit plug-ins associated to each process and activity.

Additional information:

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