

# Workplace Shell Interface Layer

Design of the Voyager Project  
[netlabs.org](http://netlabs.org)

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## 0. Revision History

Version	Who	When	What
V1.0	CLA	10.11.2007	Initial Setup
V1.1	CLA	11.11.2007	Additions: <ul style="list-style-type: none"><li>● View Registrations</li><li>● Properties Type Query</li><li>● Connection Operations</li><li>● Interface Layer Workflows</li></ul>

## 1. Objective of document

This document describes the Interface Layer between the objects of the Workplace API and the view objects of the Shell Layer of Voyager.

## 2. The Shell Layer

### 2.1 Shell Layer Components

#### Shell

The Shell is the visual representation of its components (objects), being displayed on the output device. It supports the input devices and allows user interaction with the components of the Shell.

The implementation of the shell and its components determine how they are displayed. The basic view of the Shell may be the view of a container, spanning the complete output device without a surrounding frame.

#### Input Device Handler

An input device handler provides the interface between a given input device and the Shell.

#### Item

An item represents an object of the Workplace Layer. It offers access to the Actionlist and Settingslist of the object..

#### Container

A container represents the container view of an item that implements container functionality, and therefore displays a view containing items. It offers access to the Actionlist and Settingslist of the item implementing the container functionality.

#### Actionlist

An actionlist implements the visual representation of the actions supported by the Workplace object represented by an item and allows selection of them. When an action is selected, a request for execution is sent to the Workplace object.

#### Settingslist

A settingslist implements a visual representation of the settings of the Workplace object represented by an item and allows modification of them. When a setting is modified, a request for update of the setting is sent to the Workplace object.

#### Frame

A frame surrounds/contains a Container, Actionlist or Settingslist within a graphical Shell implementation. It implements frame controls, where required.

### 3. The Workplace Layer

The Workplace Layer consists of Workplace object classes being represented by the Shell components. The Workplace classes interface all other parts of the Voyager API, so there is no direct interaction between Shell components and other Voyager classes than the Workplace classes.

### 4. The Interface Layer

The interface layer provides a framework for interaction between the Workplace objects and the Shell components/objects. This framework implements the transport of requests and results between these two layers, which may cross system boundaries.

Open views (like item, container, in-use) must be registered at the workplace object being represented by it. This is required in order to support several views on a given object on several (remote) systems.

## **5. Interface Layer Operations**

### ***5.1 Connection Operations***

#### **Connection Request**

Sender: Shell

Receiver: Desktop folder object of a Workplace

Parameters: address of Workplace target machine

Returned Result: connection information

#### **Termination Request**

Sender: Shell

Receiver: Desktop folder object of a Workplace

Parameters: none

Returned Result: Acknowledge

## ***5.2 Shell to Workplace operations***

### **Registration Request**

Sender: Container or Item

Receiver: Workplace object represented by sender

Parameters: view handle

Returned Result: Acknowledge for registration

### **Deregistration Request**

Sender: Container or Item

Receiver: Workplace object represented by sender

Parameters: view handle

Returned Result: Acknowledge for deregistration

## Representation Query

Sender: Container or Item

Receiver: Workplace object represented by sender

Parameters: -none- or (list of) specific setting(s)

Returned Result: representation settings of the Workplace object and their values

- Example for Container
  - Object Handle
  - Object ID
  - Title
  - Size/Fullscreen
  - Hidden/Visible
  - Bitmap
  - ForegroundColor/BackgroundColor
  - Font
  - ItemViewType
- Example for Item
  - Object Handle
  - Object ID
  - Title
  - Font

## Content Query

Sender: Container

Receiver: any Workplace object implementing a container view

Parameters: -none- or filter

Returned Result: list of contained items as handles or object IDs



## Actionlist Query

Sender: Item or Container

Receiver: Workplace object represented by sender

Parameters: -none-

Returned Result: list of action IDs supported by Workplace object with action attributes (selected/enabled)

## Action Request

Sender: Item or Container

Parameters: ID of action

Receiver: Workplace object represented by sender

Returned Result: Acknowledge for action invocation

## Properties Type Query

Sender: Item or Container

Receiver: Workplace object represented by sender

Parameters: -none- or (list of) specific setting(s)

Returned Result: type and range information for settings supported by receiver

## Properties Query

Sender: Item or Container

Receiver: Workplace object represented by sender

Parameters: -none- or (list of) specific setting(s)

Returned Result: settings of the Workplace object and their values

## **Properties Set**

Sender: Item or Container

Receiver: Workplace object represented by sender

Parameters: (list of) setting(s) and new value(s)

Returned Result: Acknowledge for settings modification (required ?)

## ***5.3 Workplace to Shell operations***

### **Update Notification**

Sender: Workplace object

Receiver: Container or Item representing the sender

Parameters: -none- or (list of) specific (representation) setting(s)

Returned Result: Acknowledge for update request (not for update!)

## **6. Interface Layer Workflows**

To be edited