

# Supplemental Specifications

## Inkboard

10/22/04

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## 1. Introduction

### 1.1 Purpose

This document includes all non-functional requirements, design constraints, and functional requirements not found the Use Case Model for the Inkboard project.

### 1.2 Scope

These specifications apply to the changes that will be made to implement the proposed ‘whiteboards’ Jabber-protocol communication features in Inkscape version 0.40.

### 1.3 Definitions, Acronyms, and Abbreviations

### 1.4 References

Inkscape website: <http://www.inkscape.org/>

Protocol definition: <http://www.xmpp.org/specs/>

## 2. Functional Requirements

Integrated into Inkscape must be a “light” and minimally invasive version of a Jabber client, capable of showing the availability of users and chat rooms, shared documents, and allow login and logout of the user. UI for this component should be in the menu bar. Chat support is not required.

## **3. Usability**

### **3.1. User Experience**

Any user already capable of using both Inkscape and a Jabber IM client should be able to use this feature with little instruction. (The associated “Help” document should not need to be more than 1-2 pages long.) The user should not need to understand the system’s protocols or conflict detection/resolution algorithms in order to use the whiteboard.

### **3.2. Restrictions**

The new features prevent the user from using other programs or instances of inkscape while waiting for messages or connections, unless system resources are unusually scarce. (If the user’s system does not provide sufficient memory, for instance.)

### **3.3. Ease of use**

The use of the whiteboard over multiple Inkscape instances should not be complex or inconvenient to the user (such as requiring login for every instance).

## **4. Reliability**

### **4.1. Compatability with existing software**

Use of the whiteboard feature must not interfere with the correct operation of other Jabber clients or Inkscape instances. Multiple Inkscape instances using the whiteboard must not interfere with each other.

### **4.2. Synchronizing**

No two copies of the same document should become more than 30 seconds out sync while both users remain connected to one another. Under no circumstances should any two instances of the same document become permanently out of sync (fail to correct collisions) while remaining connected to one another.

## **5. Performance**

### **5.1. Compatability with existing software**

Neither Jabber clients nor other instances of Inkscape should suffer abnormally degraded performance while a whiteboard is running. (Degradation due to extremely limited system resources or network bandwidth would, of course, occur as normal.)

## **5.2. Memory usage**

The added features should not “leak” memory (allocate memory and fail to deallocate it.)

# **6. Supportability**

## **6.1. Consistency**

The new features should be implemented in a manner consistent with existing Inkscape guidelines so that they may be subsequently supported by the on-line developer community.

## **6.2. Extensibility**

The established protocol should be simple enough to allow integration of future Inkscape features. Extension of protocol should be simple, methodical, and with appropriate comments or documentation.

# **7. Design Constraints**

## **7.1. Language and Coding**

The new features must be implemented in C/C++, in a manner consistent with existing Inkscape coding standards.

## **7.2. Communications**

The whiteboard must communicate using the Jabber protocol.

## **7.3. Jabber Constraints**

Due to protocol communication limitations and to reduce complexity of implementation, users will not be able to have the same Jabber ID logged into another service and to the Inkscape whiteboard at the same time. This means the typical user will have one Jabber ID in their usual chat program, and a separate Jabber ID for whiteboard use. Future refinements beyond the scope of this project

may allow for the use of one Jabber ID for both services. That will increase the usability of this feature.

#### **7.4. Undo**

To reduce complexity of implementation, the Undo tree is not required to be maintained over shared document sessions.

## **8. Documentation Requirements**

### **8.1. Documentation format**

Code documentation should be provided <in the form specified by the client>.

### **8.2. User Manual**

A basic User Manual (essentially a “help file”) should be provided.

## **9. Purchased Components**

Not applicable due to open source.

## **10. Interfaces**

### **10.1 User Interfaces**

The user interface for the added features should be implemented as extensions to the existing Inkscape interface. They should provide a “look and feel” consistent with the existing software.

### **10.2 Hardware Interfaces**

Whiteboard communications should have the same hardware/network/server compatibilities as any Jabber client.

### **10.3 Software Interfaces**

Whiteboard communications should interface smoothly with existing Inkscape components and features.

### **10.4 Communication Interfaces**

The whiteboard should communicate through standard Jabber servers. Whiteboard-specific message information should not appear in standard Jabber client text displays.

## **11. Licensing and Security Requirements**

### **11.1 Security of whiteboard**

Use of whiteboard communications must be secure. Unwanted users must be prohibited from intruding on document sharing sessions.

### **11.2 Jabber liscence**

Use of the Jabber protocol and libraries must conform to any Jabber usage and licensing requirements.

## **12. Legal, Copyright and Other Notices**

Added functionality will conform to any legal and copyright positions of the Inkscape program itself.

## **13. Applicable Standards**

Not applicable.

## **14. Internationalization and Localization**

Implemented messages, text and menus will be in English.

## **15. Physical Deliverables**

All new code and the documentation specified in section 8 of this document should be delivered to the client upon completion of the project.

## **16. Installation and Deployment**

Though whiteboard functionality will be developed in Windows-based environments, it should comply with other Inkscape supported platforms and not interfere with Inkscape installation procedures.

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## **To Do List**

<List of items to be completed in **THIS** artifact.>

#	Who	Due	What
1			
2			

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## Revision History

Date	Who	Revision
10/01/04	Jason Segal	Create Document
10/22/04	Jonas Collaros	Updated – reorganized and fully completed
11/11/04	Matt Weinstock	Revision – Numbering format

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