

# Risk Assessment

## Inkboard

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## Risks

<b>Risk</b>	<b>Likelihood</b>	<b>Severity</b>
Poor compatibility with Jabber protocol	Low	High
Poor or no synchronization of shared documents	High	High
No chat room sharing capability	Medium	High
Low expandability and reusability of implemented features	Medium	High
Low efficiency of newly designed protocol	Medium	Medium
Loss of platform and environment compatibility	Medium	Medium
Loss of team members at end of term	High	Medium
UI design for features unusable	Low	Low

Below are details of “high” severity risks, including a description, objectives, responsibilities, approach, deliverables and resources involved.

1. Compatibility with Jabber protocol:

To preserve the usability of the feature, it is critical that the implemented system be compatible with current Jabber protocol and libraries. To mitigate this risk, we must thoroughly examine and understand the XMPP specifications and design our new functionality with conformity in mind. Versions of our protocol design will be useful deliverables in verifying control of this risk. Our whole team will be responsible for understanding the protocol and evaluating its compatibility during the design process, and during implementation, we will need to verify Jabber compatibility with every completed feature.

During the design phase is when we are going to be applying more direct efforts on evaluating compatibility (i.e. increased person-hours). During implementation,

the focus will be on quickly first achieving and then, as it carries towards completion and testing, ensuring we are not breaking protocol compatibility.

2. Synchronization of shared documents:

To preserve the quality of user experience, it is critical to ensure that shared documents are synchronized between every user and changes and conflicts are handled accordingly. In mitigating this risk, we must design the system to minimize conflicts (e.g. tracking changes by object ID) and to handle collisions unambiguously for all clients (e.g. server timestamps with precedence to later events and delete statements) and transmission loss (e.g. sequence numbers to detect failed transmission). It will also have to ensure synchronization at sharing-session startup (e.g. host document-version precedence). This robustness needs to be a key focus of all during design and for those responsible for implementation of synchronization elements. Protocol design and the implemented synchronization control system are deliverables related to this risk, and will require less effort (person-hours) than full implementation of the protocol. The effects of any persisting problems with synchronization should be minimized.

3. Chat room sharing capability:

To promote the usefulness of the system, it is critical that the feature be fully implemented in a multi-user (chat room) context as well as user-to-user, handling the added rigors and problems of multi-user environments. Mitigating this risk entails thoughtful design of connection and session startup, user connection loss (especially the host being dropped), higher levels of communication and network traffic and, possibly, change-to-user identification. Sufficient testing within a user environment will be necessary, and the final deliverable will be the chat room capable feature, which the whole team responsible for. More person-hours will likely be needed in designing the technical details of this versatility than coding.

4. Expandability and reusability of implemented features:

To preserve the usefulness of the system over a longer time-frame, it is critical that the system designed must be able to incorporate future Inkscape features and feature-changes. This issue can be mitigated by designing a standard abstraction of the parameters and identification of any given change, so that new features and changes can be incorporated into the system. That, however, also entails the responsibility of implementing a straightforward way of making these edits and insertions. If this ability is designed before implementation, it will even be possible to use it to incorporate the current Inkscape features needing to be handled in the same standard fashion. Deliverables of this risk include a documented way of adding future features to the protocol. All will be responsible for this functionality during the design, and the implementing individuals will be responsible during coding. As with chat room capability, more person-hours will likely be needed in designing the technical details of this versatility than coding.

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To Do List

#	Who	Due	What
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1	Team	Before implementation phase	Include concrete numbers for person-hours
2	Team	Before implementation phase	Include individual assignments for risks and features

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#### Revision History

<b>Date</b>	<b>Who</b>	<b>Revision</b>
2004-10-01	Jonas	Creation
2004-11-09	Brandi	Divided “Level” into likelihood and severity to better describe the risk (requested by Salman)

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