Graspeo
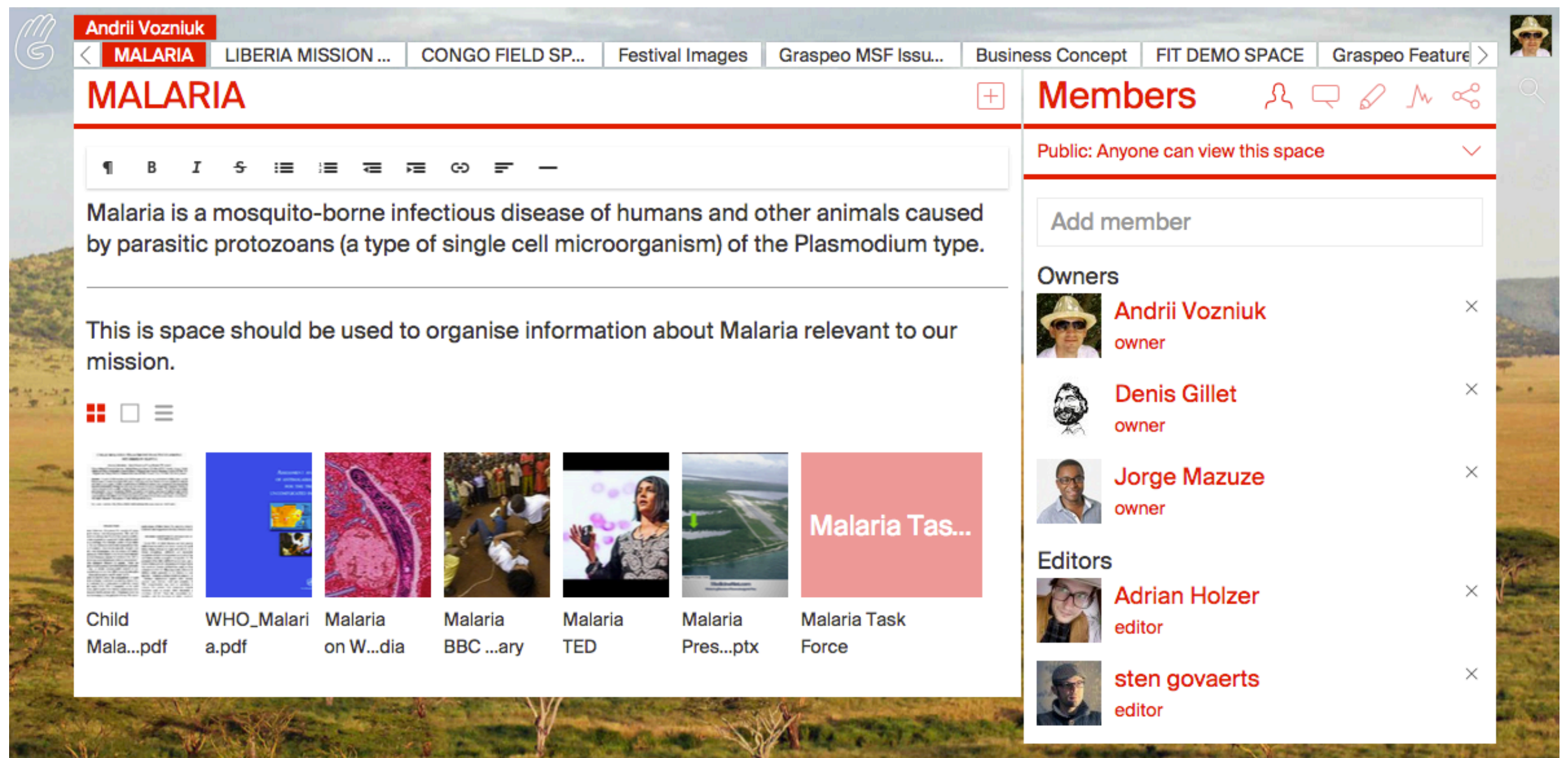# Social Media Platform for Knowledge Management in NGOs

A. Vozniuk*, A. Holzer*, S. Govaerts*, J. Mazuze**, D. Gillet*
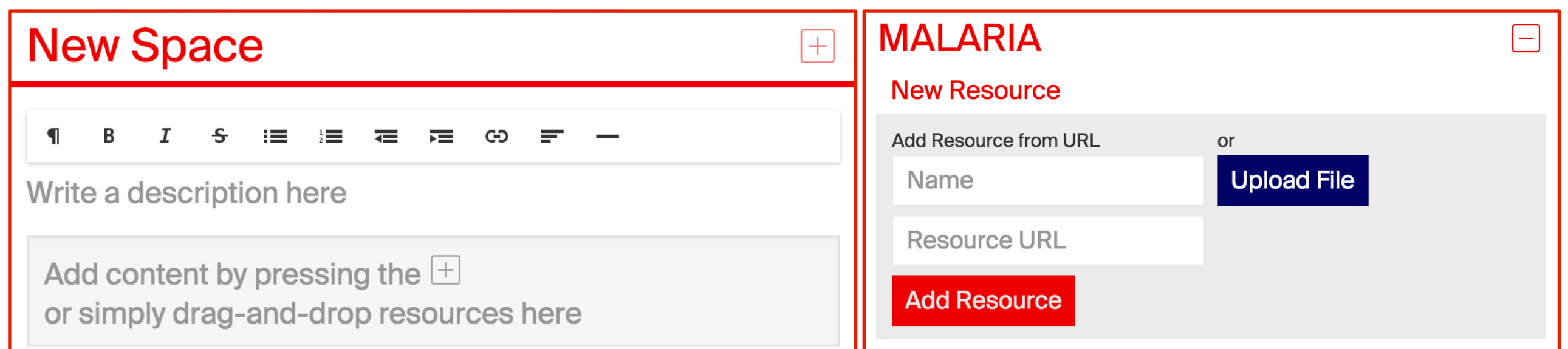## * EPFL ** MSF Switzerland

Timely access to critical information is crucial for any organization operating in situations of emergency. Deploying an adequate information system tailored to specific organizational needs and matched to the organizational structure is essential. To understand the knowledge management needs of Médecins Sans Frontières (MSF), one of the leading NGOs in the humanitarian and medical fields, we conducted in total 145 hours of in-depth interviews. We identified three key requirements for an effective knowledge management system specifically designed for large distributed NGOs. We have designed and built from ground up a novel social media called **Graspeo** to fulfill these requirements.

MSF employs over 33'000 staff worldwide and has an organizational governance structure with 24 headquarters and an operationally driven structure with 70 missions. The complex structure of MSF brings to the surface challenges related to distributed large scale knowledge management (KM).
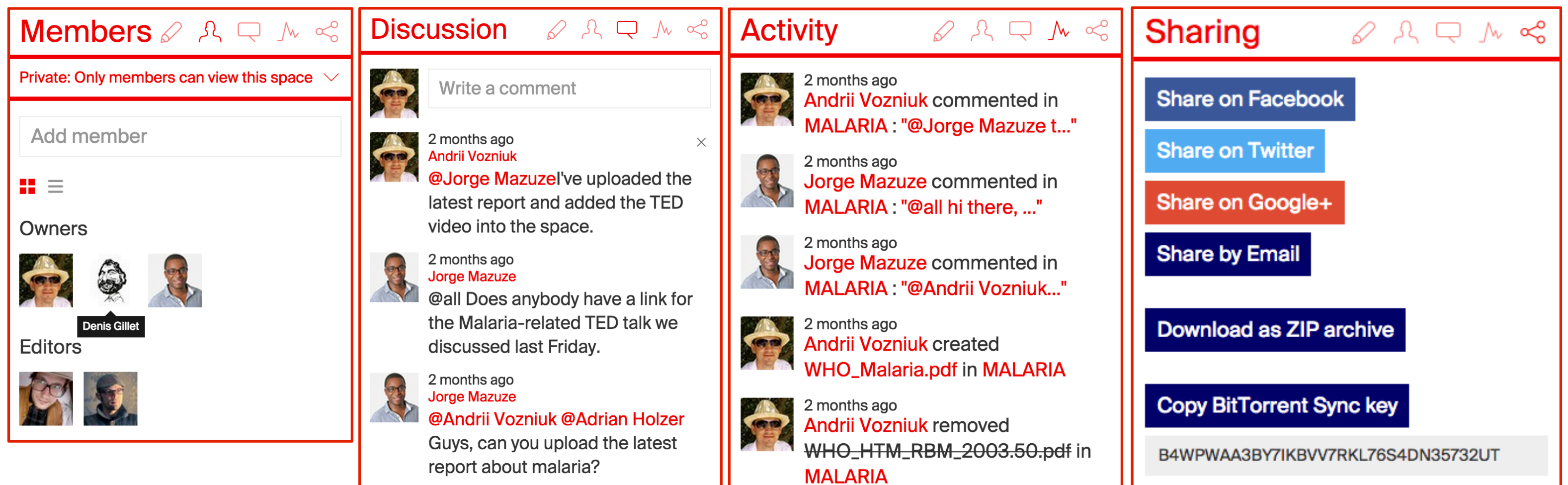

Requirement 1: Source-Agnostic Knowledge Aggregation

Graspeo supports integration and management of knowledge coming from heterogeneous sources in multiple formats, including uploaded files, web content, as well as from existing KM systems. Additionally, it supports social interactions (for example, discussions and ratings), which are often used as means of knowledge sharing. Implementing this requirement allows to have all relevant knowledge in one place preventing fragmentation.
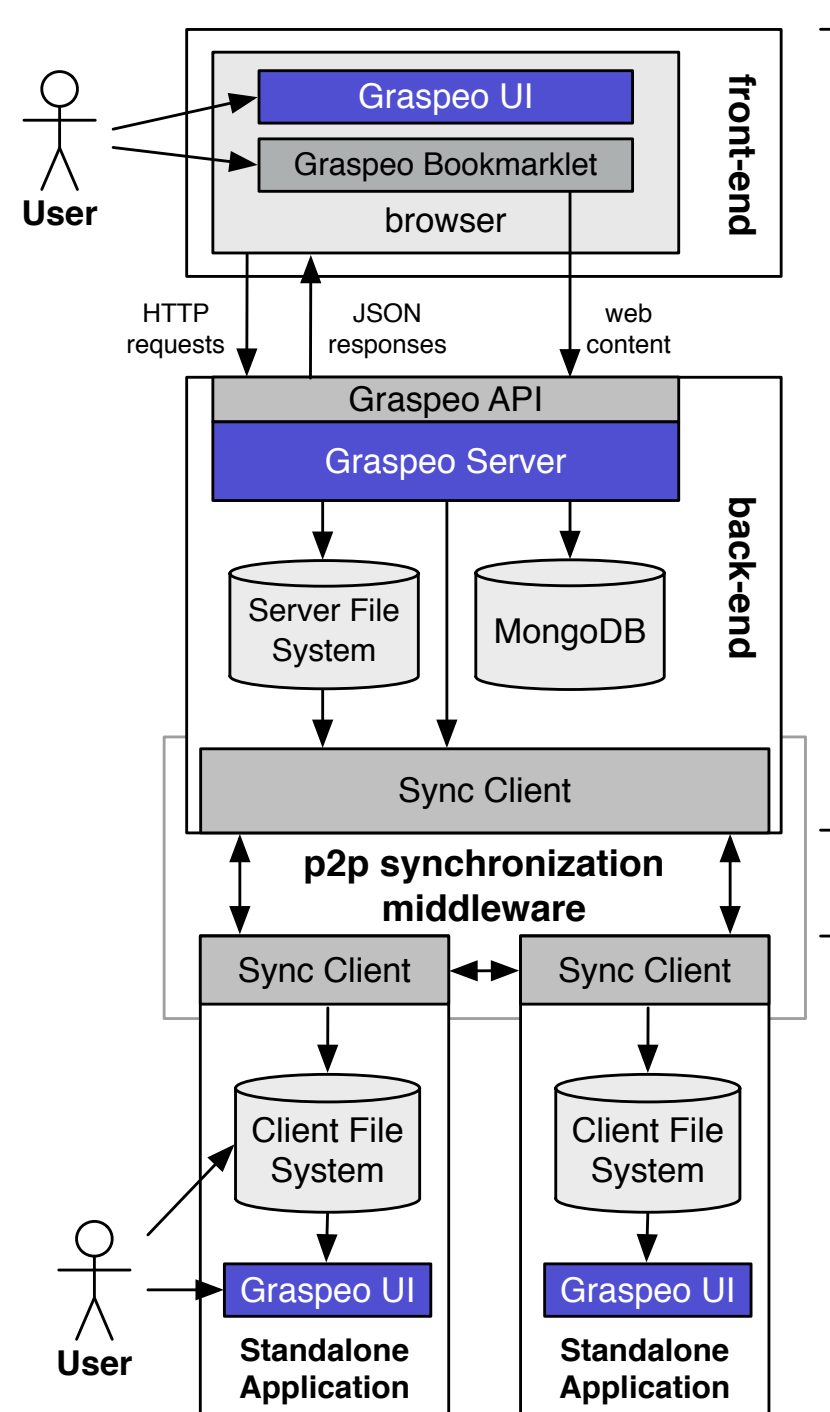

Requirement 2: Flat Knowledge Organization

Graspeo provides decentralized content and permission management by using hierarchical spaces with flat membership. A **space** is the central concept in Graspeo that encapsulates the context of a knowledge sharing. A space in Graspeo can be loosely compared to a folder with associated set of members. Each member of a space has a defined permission in this space. Graspeo allows flat space ownership so that a space can be co-owned by several members permitting decentralized permission management.

Requirement 3: Online and Offline Knowledge Access

Online System

The Graspeo online system is a single page web application built with JavaScript end-to-end. Thanks to powerful search and content viewer it is possible to find and access documents online without any custom software.

Peer-to-Peer Synchronization Middleware

In order to synchronize offline and online content, Graspeo relies on a peer-to-peer data synchronization framework BitTorrent Sync. For this purpose each space has an associated secret BitTorrent Sync key. Thanks to the local peer discovery protocol, Sync is able to find local peers and synchronize directly with them potentially benefiting from a faster local network. The data does not need to go through a central server. This allows to still perform local data exchange when the central server is not reachable and eventually synchronize with it when it becomes available again.

Offline System

The online content of Graspeo can be synchronized to a user's device (laptop, tablet, smartphone) file system using the peer-to-peer middleware and be made accessible offline when no Internet connection is available.

Try yourself at
graspeo.org