



Seafile

Seafile, what's new in 2023

Jonathan Xu, Co-founder of Seafile

Seafile Overview

Seafile Cloud Storage

Collaboration

✓SeaDoc

✓Online Office Integration

Integration

✓LDAP, Shibboleth, OAuth

✓Restful API

Usability

✓Drive Client

✓Windows Experience

Full Platform

✓Windows, Mac, Linux

✓Web, Android, iOS

Reliable

✓Reliable file syncing

✓Data integrity check

✓Used by millions

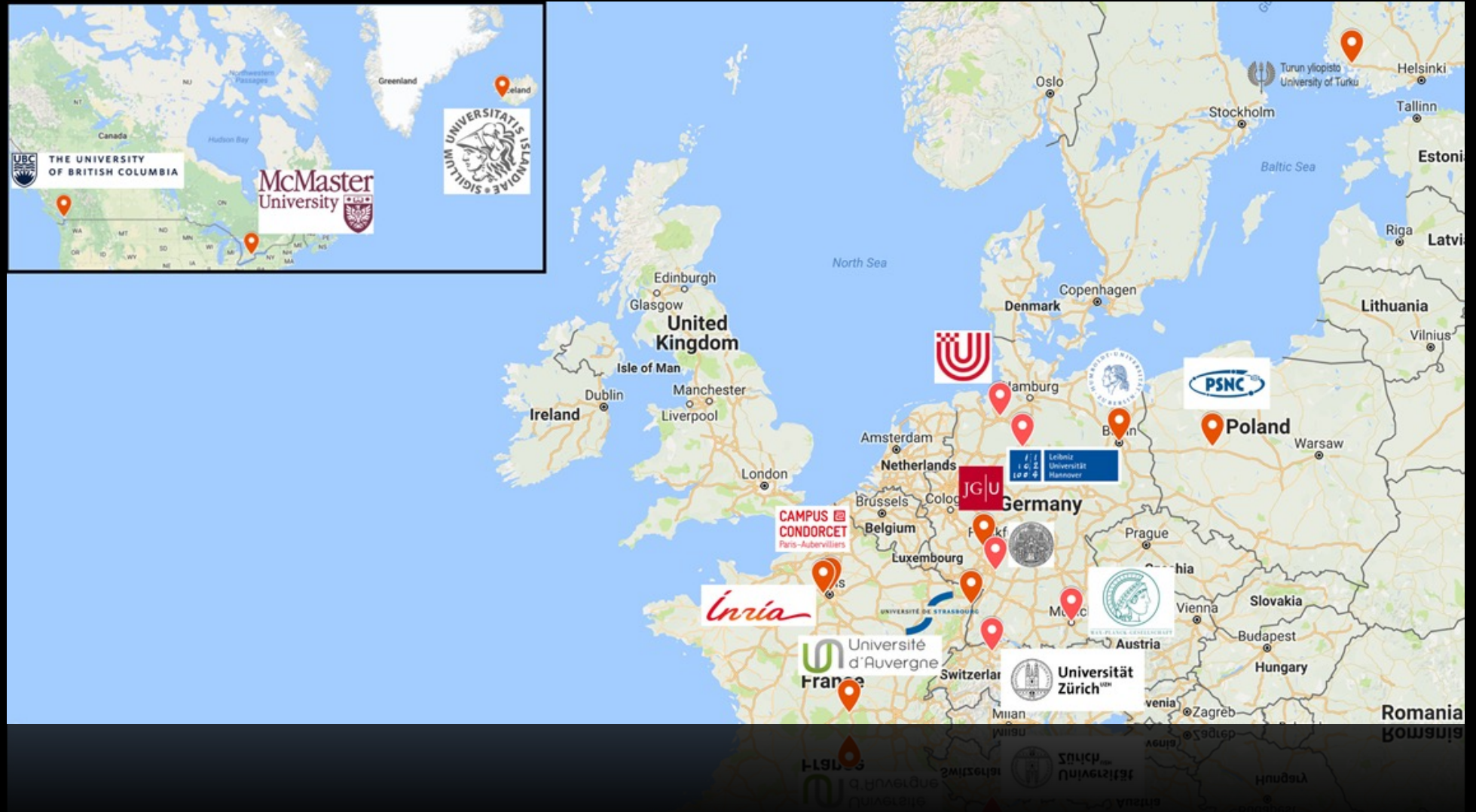
High Performance

✓Sync 10k small files per minute

✓Low server loads

Seafire Educational Users

- Europe
- Canada
- China



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User Identification Management Redesigned

Current Restrictions

- Cannot support multiple user authentication methods at the same time
- Not easy to change user's email address

Redesign in version 11

- Introduces virtual user IDs - random, internal IDs generated for new users instead of email addresses or SSO identity
- A mapping between the email/SSO ID and virtual ID is stored in different database table
- Easy to change email or SSO ID by updating the mapping table
- Easy to support unlimited number of authentication methods

More Features in the Community Edition

Moved from Pro Edition to Community Edition

- **File activities allows users to view changes to all libraries in a dashboard.**
- **Internal links (a.k.a. smart links) remain pointing to the same file after the files is moved or renamed.**
- **History for files (e.g. Office files) can be saved to database, for faster access.**
- **Notification emails can be sent to users in a periodical manner.**

Invisible Folder Permission

What's folder permissions?

- **Folder permissions are used to fine-tune the share permissions for sub-folders of a shared folder or library**
- **E.g. read-write permission to a group for a folder, and read-only permission to specific user in that group for some sub-folders**

What's invisible folder permissions?

- **Hide some sub-folders from a share folder for specific users or groups**
- **E.g. 1: Share a folder to a group, but hide some sub-folders from one user**
- **E.g. 2: Share a folder to a group, but each user can only see his/her part of the folder**
- **Works with SeaDrive too, but not sync client**

Updates to Other Components

Go Fileserver

- Go fileserver is a new component for handling file syncing, upload, download
- It provides higher concurrency and more modern http implementation
- It is production-ready in version 10
- Used by some universities and our cloud in China for 1-2 years

Desktop Clients

- SeaDrive 3.0 for macOS is production-ready (impl. with File Provider API)
- Support SSO with desktop browsers, to avoid browser compatibility issues

Improved Activities UI

Switch between activities

All Activities

My Activities

Modified by ▾

Filter by modifiers

Find modifiers



晋腾



冉继伟



史宇昊



尹剑飞



潘凌涛



安冰



潘凌涛

Updated file

4.4.0.md

seafile-table

an hour ago



晋腾

Updated file

统计图表中的地图上支持显示具体数字的设计.sdoc

seafile-editor

an hour ago



晋腾

Updated file

Crisp Bot调研.sdoc

seafile-editor

an hour ago

file

统计图表中的地图上支持显示具体数字的设计.sdoc

seafile-editor

33 minutes ago

file

API Gateway支持table_name_id调研.sdoc

seafile-table

38 minutes ago

file

统计功能中的图表样式改进.sdoc

seafile-table

38 minutes ago

file

图表功能公共组件库应用到通用应用.sdoc

seafile-table

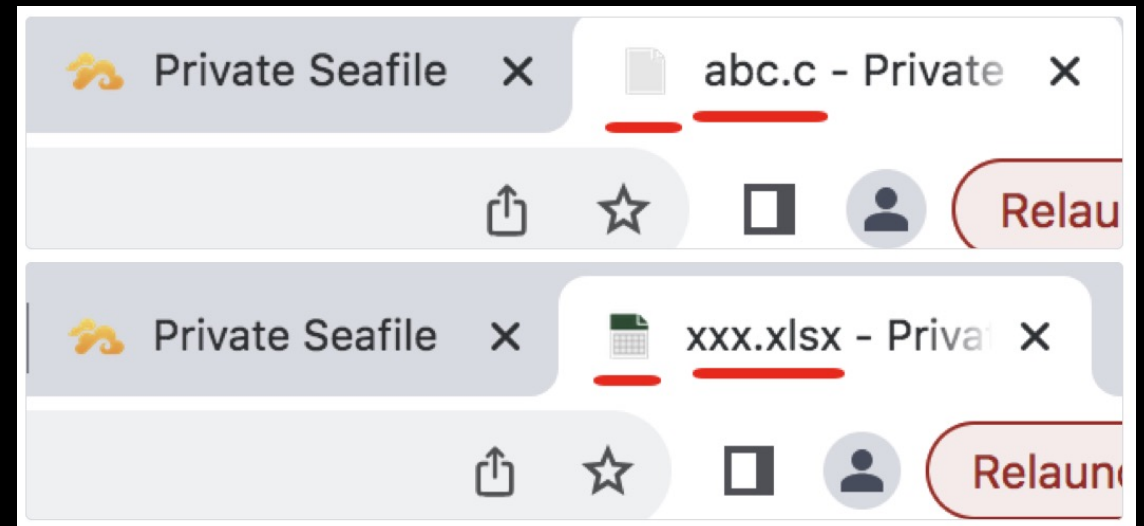
an hour ago

Updates to File/Folder Icons

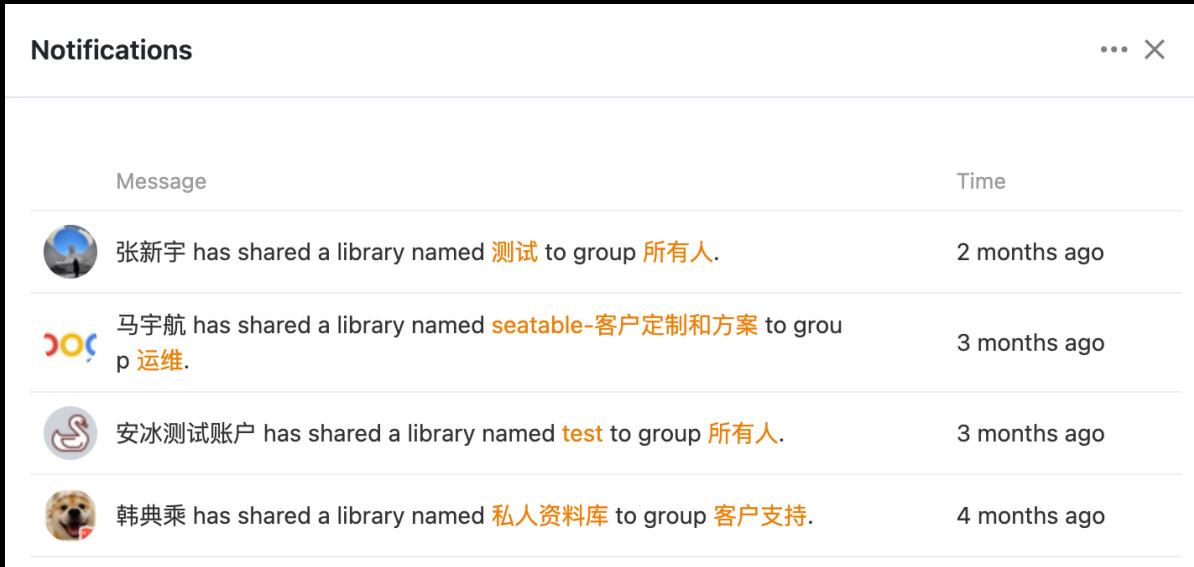


Favicons changes based on file types

- Shared folders get special icons
- Folder icons are updated too

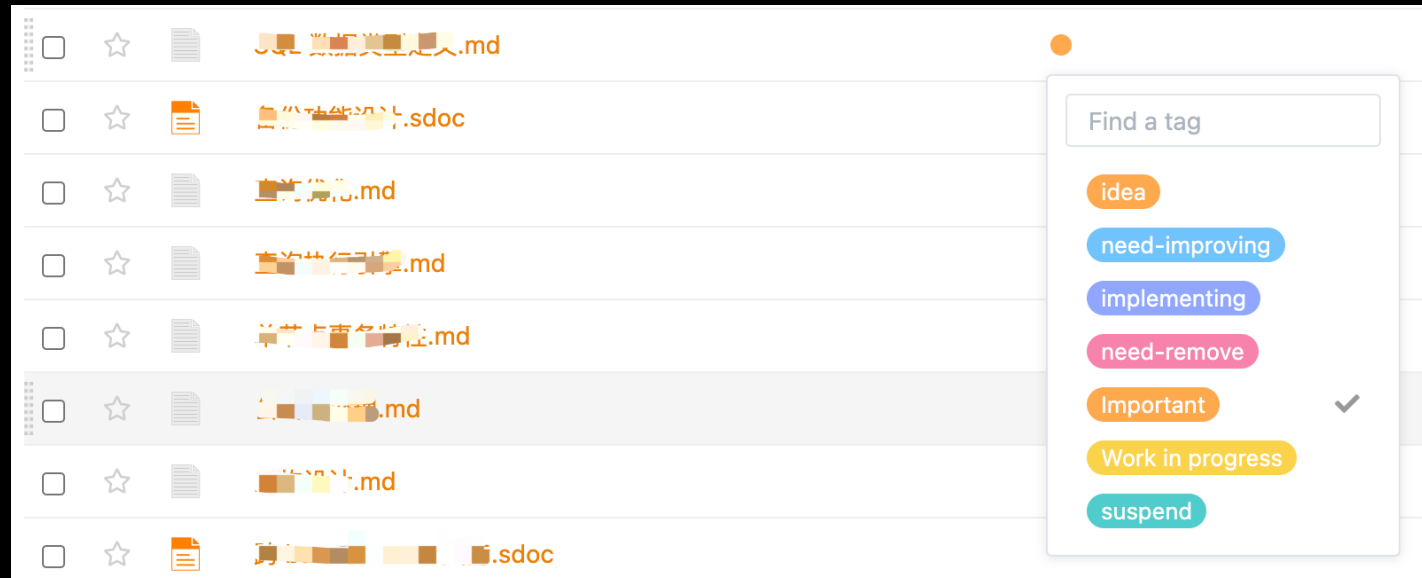


More UI Improvements



Notifications now open in a dialog, instead of a new tab

File tags become more colorful and easier to use



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SeaDoc – Native Content Collaboration in Seafile

The screenshot displays the SeaDoc web interface. At the top, the document title is "0.3发布稿 (英文) .sdoc" with a star and link icon. The right sidebar contains icons for editing, tagging, comments, sharing, and user count (1). The main toolbar includes navigation, "Insert", "Title", "Default...", "26", "I", "B", "U", a color picker, "A", and list icons. The left sidebar shows an "Outline" panel with a close button and a list of sections: "Revision and review function improvement", "Document comments improvement", "Adding document tagging feature", and "Other changes".

Revision and review function improvement

The entire process of creating, editing, and publishing revisions is now optimized.

Creating a revision opens in a new window. A special logo has been added to the header of the revision editing page, so that it can be better distinguished from ordinary document pages.

The screenshot shows a revision editing window for "draft.sdoc" (Revision 7, Created at 2023-11-16 16:21). The window has a red box around the "draft.sdoc" logo and a red arrow pointing to it. The window's toolbar is identical to the main interface. The window's outline panel shows a list of sections: "标题一" (1.1, 1.2, 1.3), "标题二" (2.1, 2.2, 2.3), "标题三" (3.1, 3.2, 3.3). The main content area of the window shows the word "draft" in a large font.

- 1
 - 1.1
 - 1.2
- 2
- 3

• 1.1.1

1.2

- After a revision has been published, the revision page can continue to be accessed for easy subsequent checking of the revision.

Unwanted revisions can now also be quickly deleted from the original document page.

SeaDoc – History

- **Back to 2019, we released an online document editor based on Markdown**
- **The editor lacks of a few key features to make it widely used**
- **No real-time collaborative editing**
- **Table editing is limited: merging cells, changing column width, cell coloring**
- **Cannot change fonts, text and background colors**
- **Revision/Review work is not really working**
- **No inline comments**
- **SeaDoc is our attempt to solve these issues**

SeaDoc – Key Ideas

- **Expressive: rich format, including some new format elements (e.g. callouts, Youtube videos)**
- **Lightweight and easy to use**
- **Documenting linking to connect related documents**
- **Document review workflow**
- **Custom .sdoc file type (JSON format)**
- **APIs for automating document generation and processing (WIP)**
- **AI integrations for generation, summarization and management (TBD)**
- **Open source and integration into 3rd party applications (TBD)**

SeaDoc – Use Cases

- **Lightweight document writing and note taking**
- **Lightweight and real-time document collaboration**
- **Knowledge management, Team Wiki with document linking**
- **Writing Technical documents with review workflow for changes**

SeaDoc – Complex Table Formats

Category	Features	Description
Text Formatting	Text color	Change text color
	Font size	Change font size
	Text Highlight	
Table Formatting	Cell merging	
	Cell coloring	
	Changing column width	

Text Alignment

Cell Coloring

Cell Combination

Column Width

SeaDoc – Expressive Text Formats

Text Color and Font Size

SeaDoc 0.3 is now available for testing!

Text Highlight

SeaDoc is an extension to Seafile that provides online collaborative documentation and knowledge management. Key features include:

- Feature-rich collaborative document editor
- *Document process management*, you can use document locking, revision review and other functions to manage the document workflow
- Document labeling capabilities, you can use the label to manage the status of the document

Font and Size

Key enhancements in SeaDoc version 0.3 include:

- Revision and review function improvement
- Document comment function improvement

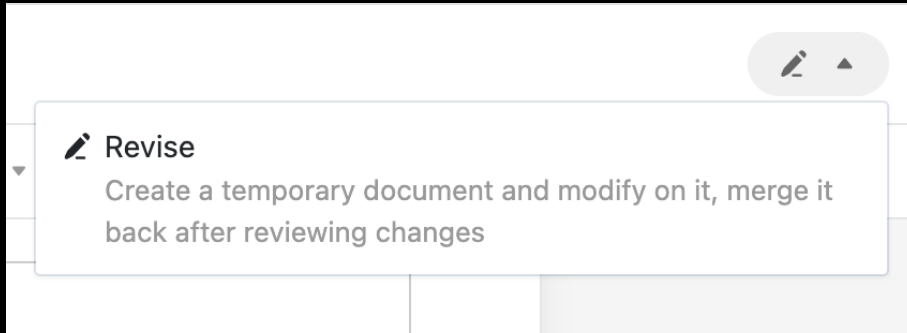
 |  gging feature is added

Callout Element

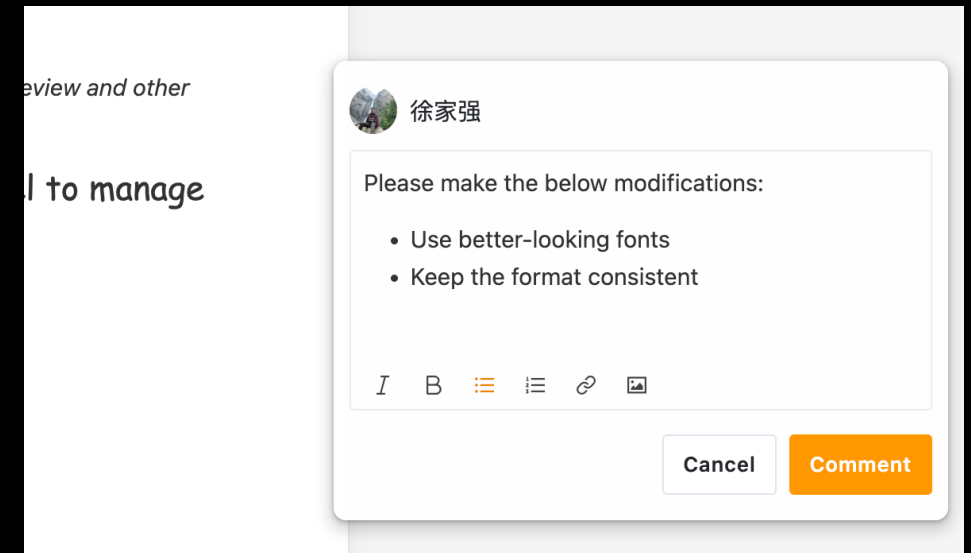
 This is a BETA version

SeaDoc – Document Revision and Review Workflow

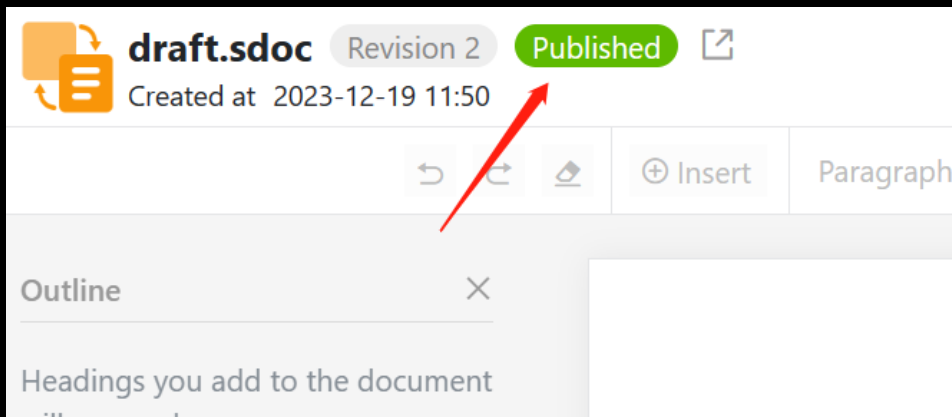
1. Create a revision for document



2. Reviewer comments on revision, with formats



3. Reviewer publishes the change



SeaDoc – Other Useful Features

- **Real-time co-editing on the same document**
- **Showing presence and edit position of collaborators**
- **Freeze a document: seal a document to prevent further changes**
- **Converting to and from Markdown and docx formats**
- **List all revisions and view the changes**

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What is Semantic (AI) Search?

Keyword-based Search

- Documents are split into "tokens" and indexed with "inverted index" data structure
- Relevance of search results is calculated based on appearance of keyword in the indexed documents
- Very good at finding exact matches
- Not good at searching different words with similar meaning
- Index size is proportional to the size of documents
- Example: ElasticSearch, OpenSearch, Lucene, etc

What if I don't remember the exact keywords?

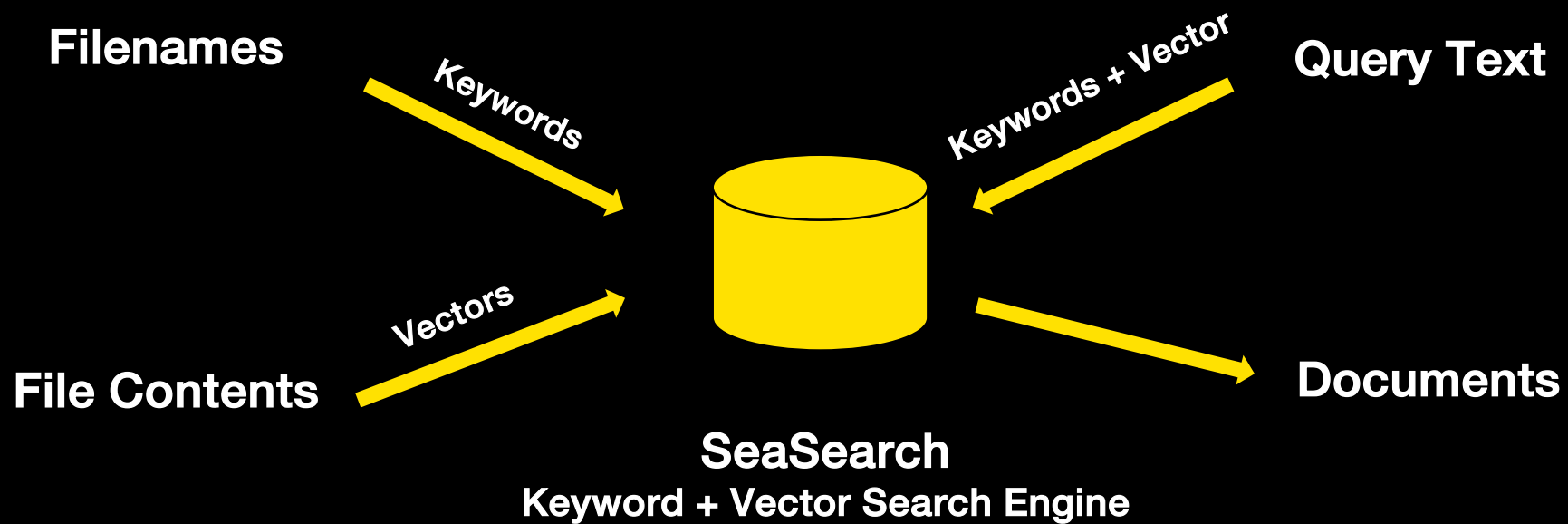
This usually happens when you want to search file contents.

What is Semantic (AI) Search?

Semantic Search

- Documents are converted into high-dimensional vectors ("embeddings") with AI models
- Queries are converted in the same way
- Relevance of search results is calculated based on the distance in vector space
- Very good at finding semantic similarities
- No guarantee to return exact match results due to stochastic nature
- Index size is much smaller since information is "compressed" into vectors

Architecture for AI Search in Seafile



Why SeaSearch?

- **ES's vector search requires a few hundreds GB RAM for 10M vectors**
- **ES can only support relatively small number of indexes, each in large size**
- **Purpose-built vector databases are either too complex or use high memory**
- **Only file names are indexed into keywords, so we don't have large keyword indexes**
- **We want to index each library independently, for scalability and speed**
- **SeaSearch is built upon ZincSearch, adding clustering, vector index, etc**
- **Not a general purpose search engine, but customized for our own needs**



THANKS

KEEP CONTACT

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