



SEN

a /home for your thoughts

2025 update by Gregor B. Rosenauer

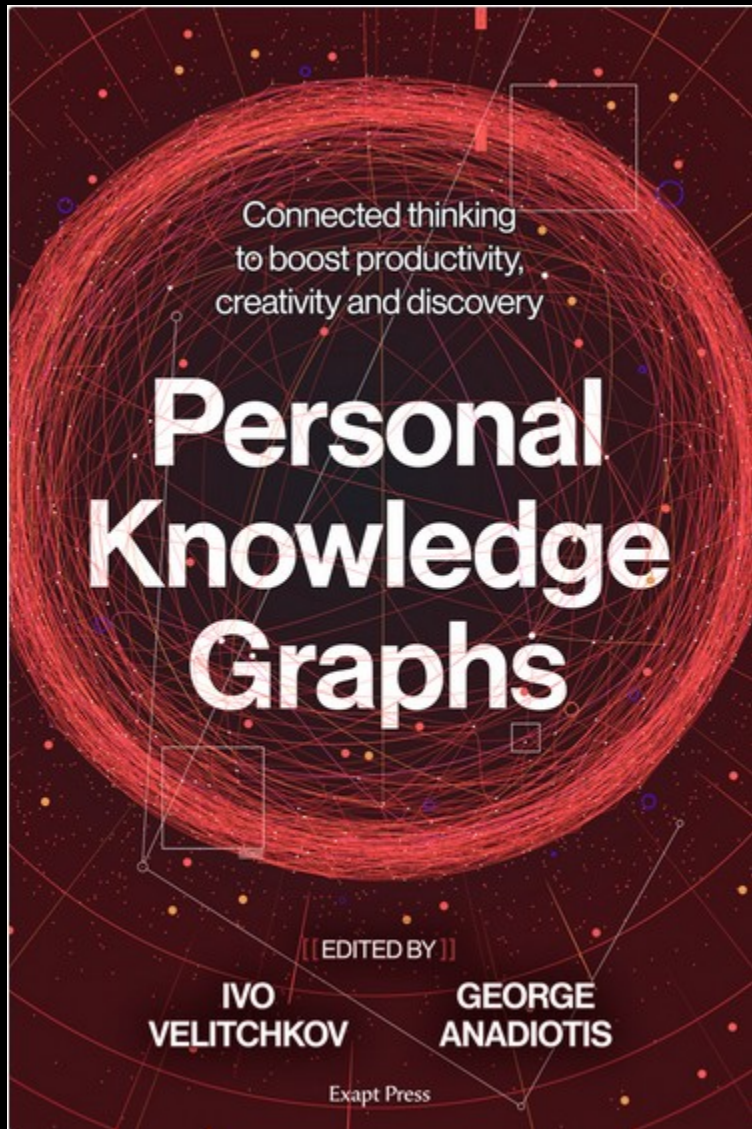
About



Father
Founder (incubation)
Computer Scientist
Humanist
Tinkerer
Information Junkie
Book Nerd

About

- * contributed chapter on SEN
- * introduction and technical overview
- * prototype in development
- * concept proven





Tsundoku

積ん読

People who collect books but never read them

Tsundoku is the phenomenon of acquiring reading materials but letting them pile up in one's home without reading them. The term is also used to refer to unread books on a bookshelf meant for reading later.

* actual crime scene in my home

- fighting the information overload in your local files
- current desktop systems not designed for this
- tools getting more complex and cause friction
- With every new piece, you're back to chaos



- current systems limit you to Markdown files
- you see only shadows of the real world
- not everything is a text
- you loose semantics





One Tool to bind them all?

Complexity



It's a Web, not a Stack!

File-Centric vs Data-Centric

Data is Text but *tool specific*

Data is at the *center* and *shared*



Flexibility



Vertical Tools vs Horizontal Infra

- * consensus: file-based
- * maps well to atomic notes, Zettelkasten
- * still imposes tool (plugins) and format (text with queries)
- * creates vertical complexity
- * tight coupling tool – plugin – your data
- * not good at separating code from note

Problem with Files and Folders

- * does not scale
 - messy, hard to search, overlaps and duplicates
- * strict parent-child (“contains”) relation
 - does not map well to actual usage patterns
- * files owns content, hide information to outside
 - metadata not searchable or handled separately (DB)
- * apps own data, needed to access information
 - even with open formats – depend on tools for PKM?
- * text but not readable
 - tools put plugin code in your text notes!

SEN and its Data Centric Design

- * information is set free, Entities as first-class citizens
not owned by any single app, metadata exposed
- * simple, readable, object based (simple types)
can be inspected without apps
- * apps as Visitors
apps for advanced data handling
- * <http://datacentricmanifesto.org/>
- * FAIR principles
(Findability, Accessibility, Interoperability, and Reuse)

SEN – The PKM Environment

- * combine the best of both worlds:
 - native types + local-first + files&folders (with a twist;)
- * basic knowledge management without custom tools
 - search, manipulate and navigate metadata+relations
- * integrate into familiar desktop environment
 - intuitive handling without learning a new tool
- * extensible and open to other use cases
 - extract metadata, relations, retrieve info, integrate AI
- * SEN = Simple, Extensible and Native ;-)

Global and Connected

- * fully user controlled
- * Enrich
- * Extract
- * Exchange



Local and Protected

- * private and secure
- * self-contained (USB drive)
- * sensitive environments
- * journalists, activists
- * researchers, writers



With SEN, you CAN

Custom Apps Now!

Easily build simple custom applications for personal use based on semantic data views.



OS Challenges for PKM

- * solve issues with files & folders
- * flexible access to *custom* metadata
- * visualisation (file browser, relations, types, metadata)
- * search (consistent, system wide)
- * configuration (for average users)
- * integration with desktop apps (deep links?)

No system currently supports this!

**“We build our computer systems
like we build our cities -
over time, without a plan, on top of ruins”**

— Ellen Ullman



Haiku is an open source operating system under constant development. Specifically targeting personal computing, Haiku is a fast, efficient, simple to use, easy to learn, and yet very powerful system for computer users of all levels.

[https://www.haiku-os.org/
about/](https://www.haiku-os.org/about/)

- * Specific focus on personal computing
- * very responsive and open source
- * Database-like file system (BFS) with support for *indexed metadata*

[https://www.haiku-os.org/
about/](https://www.haiku-os.org/about/)

Books (Search)

Find

Recent queries

Book by attribute On All disks

ISBN is 9780262047036

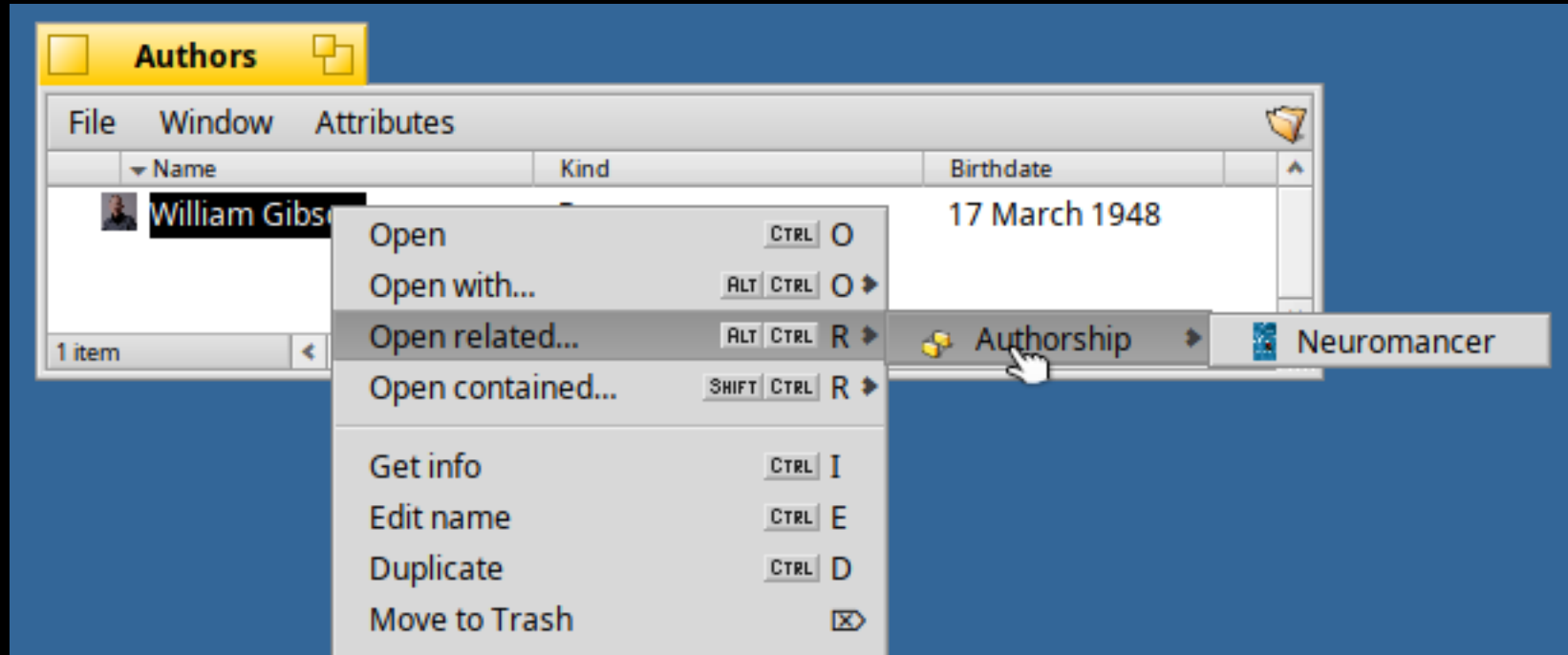
Remove Add

Query name: find book by ISBN

Include trash Temporary

Search

Relation View



Book use case

File Window Attributes

Name	Size	Modified	Kind
Authors	-	14. March 2025 um 23:15	Folder
Book Notes	-	12. March 2025 um 13:21	Folder
Library	-	15. March 2025 um 12:10	Folder
Books about Information	-	15. March 2025 um 01:03	Query

Library

File Window Attributes

Title	Publisher	ISBN	Subjects
Cybernetics and the Origin of Information	Rowman & Littlefield, Incorporated	9781786614995;1786614995	-
Giordano Bruno and the Hermetic Tradition	Routledge;Taylor & Francis Group	1136864121;9781138...49X;9781136864124	Bruno, giordano, 1548-1600;Herm
Neuromancer	WSOY;Aleph;Ace;...inotaur;V. Heyne	9788842907466;9783...6638364;978044100	Information superhighway;Comp
Count Zero	-	-	-
Mona Lisa Overdrive	-	-	-
The Exegesis of Philip K. Dick	Brilliance Audio;Or...erence Publishers	1501221264;9781455...334;9780575132450	Notebooks, sketchbooks;Philosop
Confessions of two brothers [and] Llewellyn Powys	Sinclair Browne;Ro...ed;Scholarly Press	9780863000041,0403...045;9780863000058	Authors, English;Biography;Englis
American Prometheus	Random House Es...stone Audio;Knopf	9780375726262	physics;Manhattan Project;atomic
Things I don't want to know	Notting Hill Edition...uin Books, Limited	9781907903632;1907...57224X;0241983088	Writing;English literature (collecti
Tiny Experiments	Penguin Publishing...file Books Limited	0593715136;9780593...153;9781800819153	-
Jerry Todd and the Rose-Colored Cat	Wildside Press;Gro...ndently Published	9798580581958,1434...490988,1434491927	Children's fiction;Cats, fiction;Mys

Personal Library „App“

Book: Subjects contains Autobiography - Mar 18, 05:36:28 PM

File Window Attributes

Name	Location
Philip K Dick, Ubik	/boot/home/Desktop...k use case/Library/
Prometheus	/boot/home/Desktop...k use case/Library/
Things I don't want to know	/boot/home/Desktop...k use case/Library/

3 items

Authors

File Window Attributes

Name	Kind	Birthdate
William Gibson	Person	17 March 1948

1 item


File Types Configuration

FileTypes

File Settings

- > application
- > audio
- ▼ entity
 - Book
 - Document Outline
 - Object
- > image
- > locale
- > message
- ▼ meta
 - Collection
 - Concept
 - Context
 - Ontology
 - SEN Plugin
 - Tag
 - Topic
- > multipart
- ▼ **relation**
 - Association
 - Authorship
 - Book Quote
 - Contains
 - Document Reference
 - Source Include
 - Text Reference

Icon



File recognition

Extensions:

Rule:

Description

Internal name: relation

Type name:

Description:

Preferred application

Extra attributes

Source ID	String
Target ID	String
Label	String
Kind	String
Description	String

Example - Movie Notes

Name	Timecode Start	Timecode End	Comment	Kind	Chapter
Closing Scene	16.05.23	-	Look into my eyes...	relation/movie-reference	13
Darling I love you	-	-	-	Audio file	-
Invasion of Casablanca	-	-	-	iCalendar	-
Casablanca the Movie	-	-	-	Video file	-
Movie Poster	-	-	-	Image file	-

5 items



Casablanca

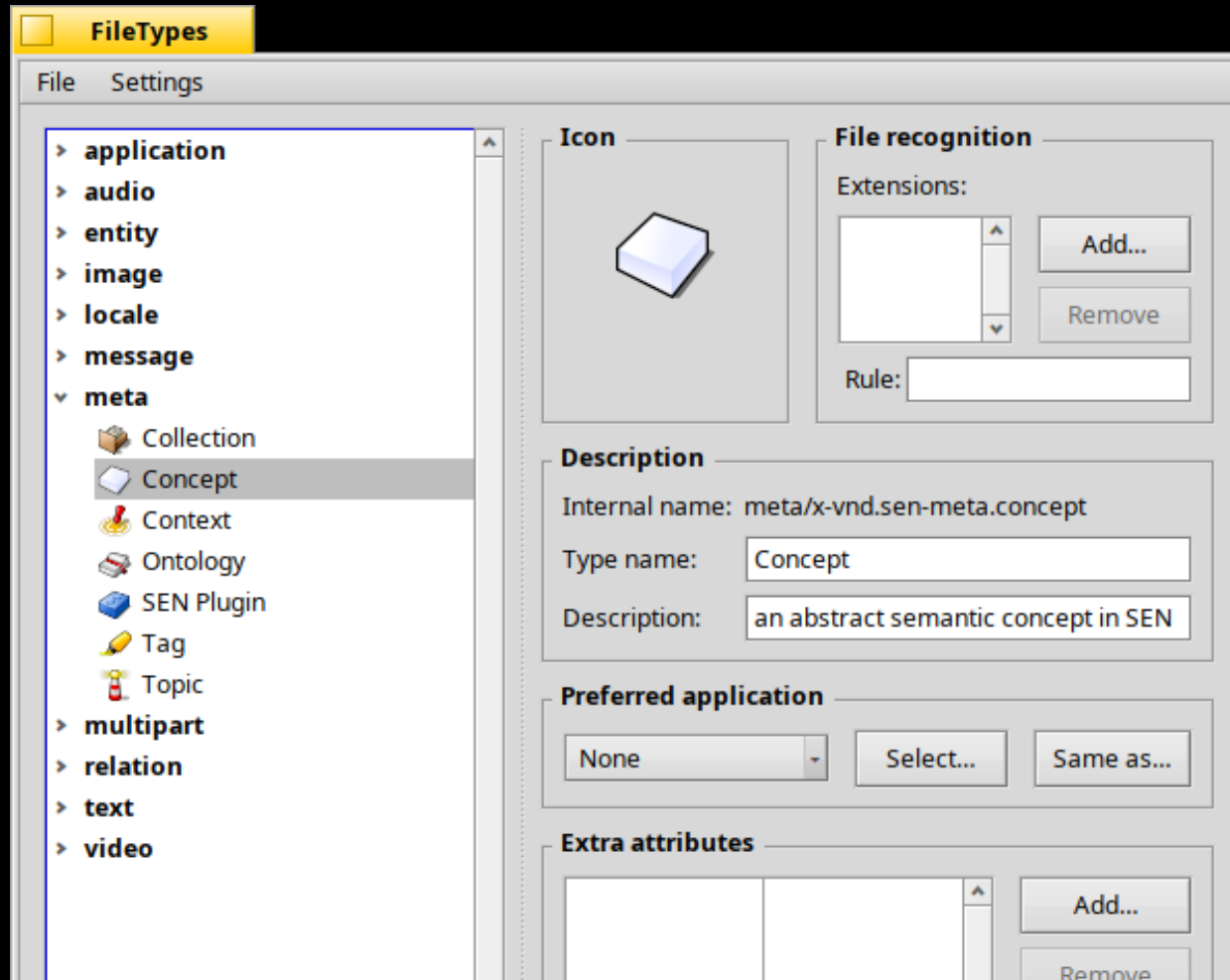
File Window Attributes

Name	Chapter	Timecode St...	Timecode End	Comment	Kind
Closing Sc...	13	16.05.23	-	Look...es...	Movie Reference
Darling I l...	-	-	-	-	Audio file
Invasion o...	-	-	-	-	iCalendar
Casablanca	-	-	-	-	Video file
Movie Pos...	-	-	-	-	Image file

5 items

- Copy layout
- Paste layout
- ✓ Name
- Size
- Modified
- Created
- ✓ Kind
- Location
- Permissions
- Relation
 - generated
 - ✓ Comment
 - Virtual
 - Type
 - Role
 - Label
 - Valid From
 - Valid To
 - Movie Reference
 - Chapter
 - Timecode End
 - Timecode Start

Meta Types Configuration



Demo Time!

- * prototype with working core concepts
- * use cases done:
 - PDF self-relations
 - semantic relations between files
 - source code dependency relations
 - Book use case
 - PDF Bookmark deep links and relations
 - Book and Author enrichment with metadata from OpenLibrary (Internet Archive)

Reach out...

- * here at PKM Summit 2025!
- * info@sen-labs.org
- * Twitter/X: [@labs_sen](https://twitter.com/labs_sen)
- * <https://senlabs.substack.com>
- * <https://www.sen-labs.org>
- * all free and open source at
<https://github.com/sen-laboratories>