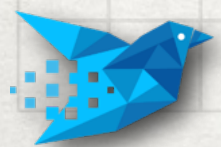


“

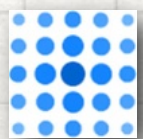
TRYING TO MANAGE TERMINOLOGY  
ON THE INTERNET IS HELL.

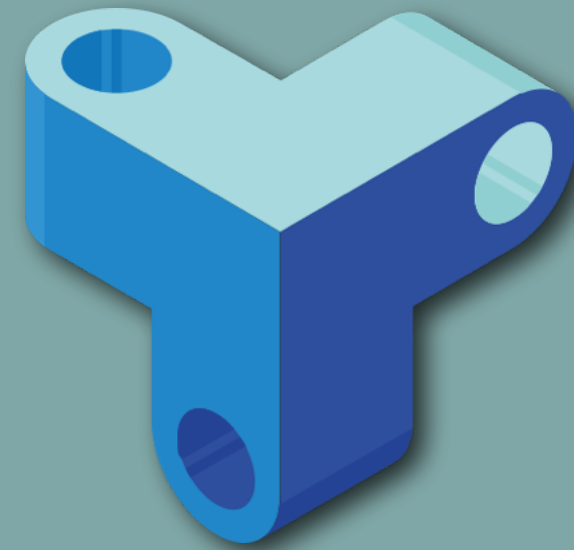
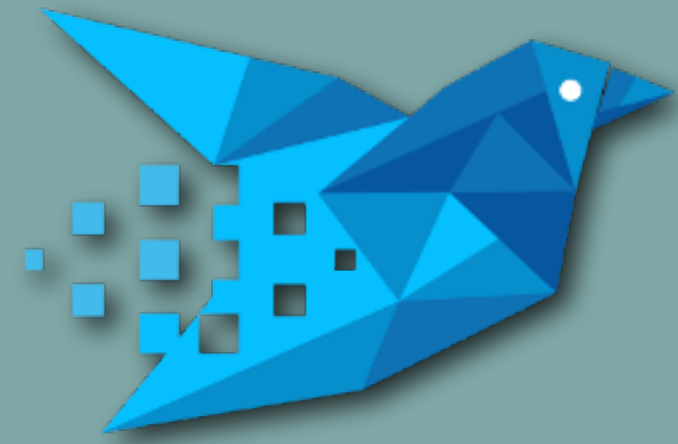
— *Darrell O'Donnell*

”

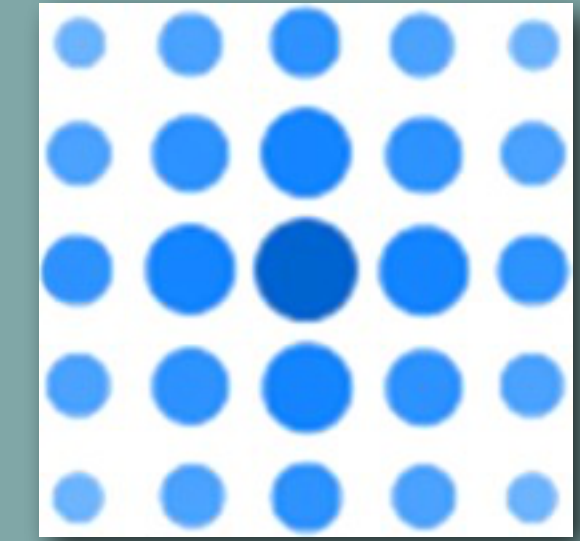


TRUST  
Over IP





**TRUST**  
Over **IP**



# START BUILDING CONSENSUS TODAY

# SPEC-UP-T

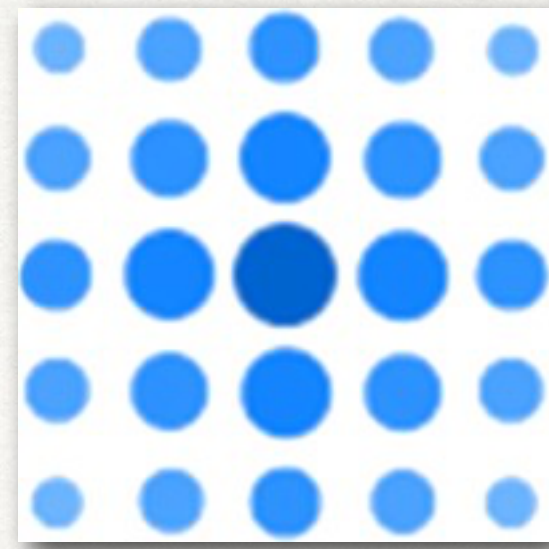
Henk van Cann, Blockchainbird, @henkvancann

**LF** DECENTRALIZED TRUST

WHO ARE WE?

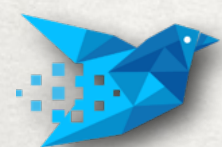
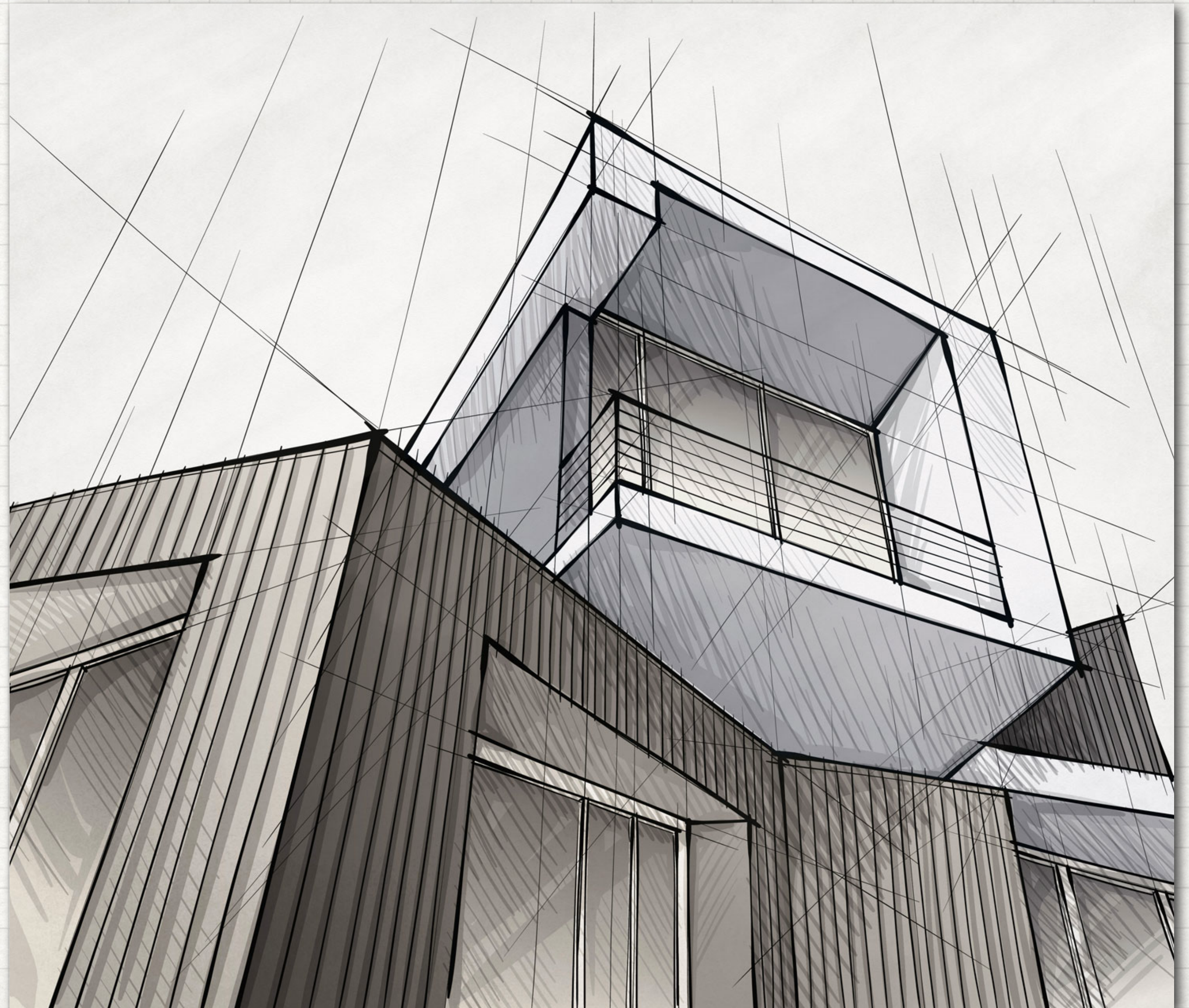
CTWG

WHY?

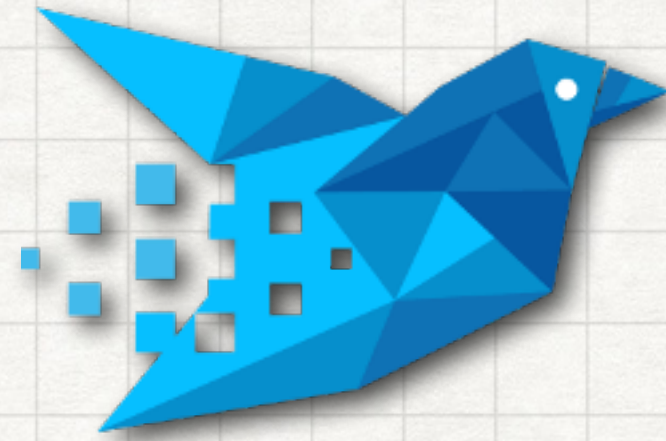


# OPEN-SOURCE "EASY PEAZY" TECHNICAL SPECIFICATION

DANIEL BUCHNER, INVENTOR



# AGAIN, WHY?

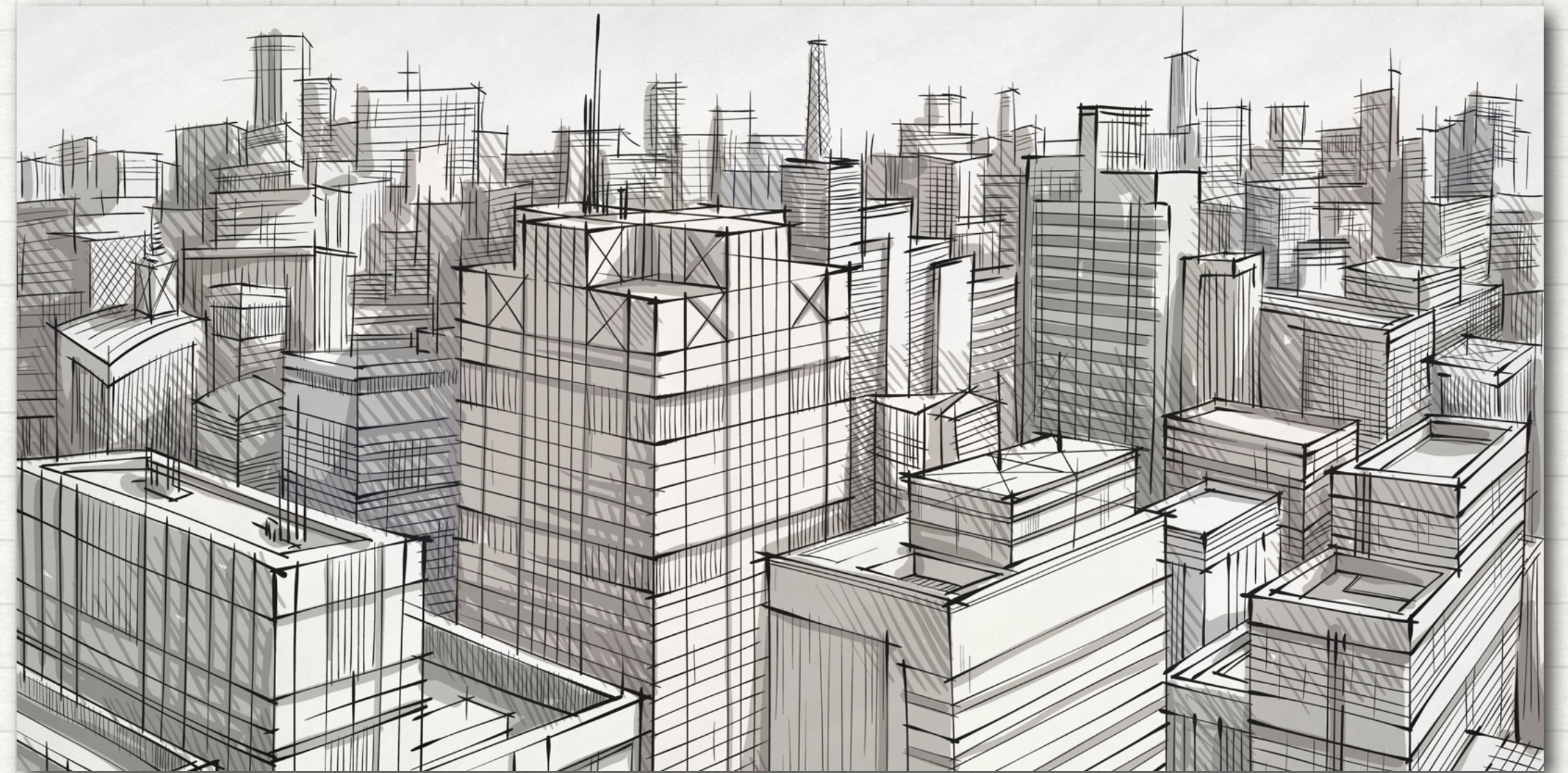


- 1.TEXT
- 2.IMAGES
- 3.REFERENCES
- 4.TERMS
- 5.SINGLE PAGE
- 6.WEBBASED
- 7.VERSIONED
- 8.HARVEST DEFINITIONS
- 9.NORMATIVE/INFORMATIVE  
LINKING
- 10.COMMANDLINE & GUI

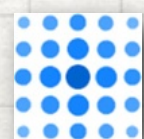
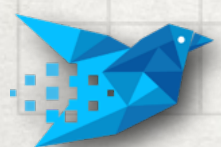
DANIEL BUCHNER, INVENTOR  
KOR DWARSHUIS, DEVELOPER

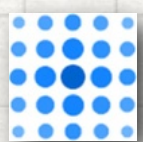
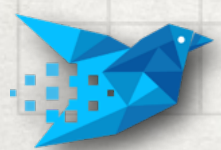
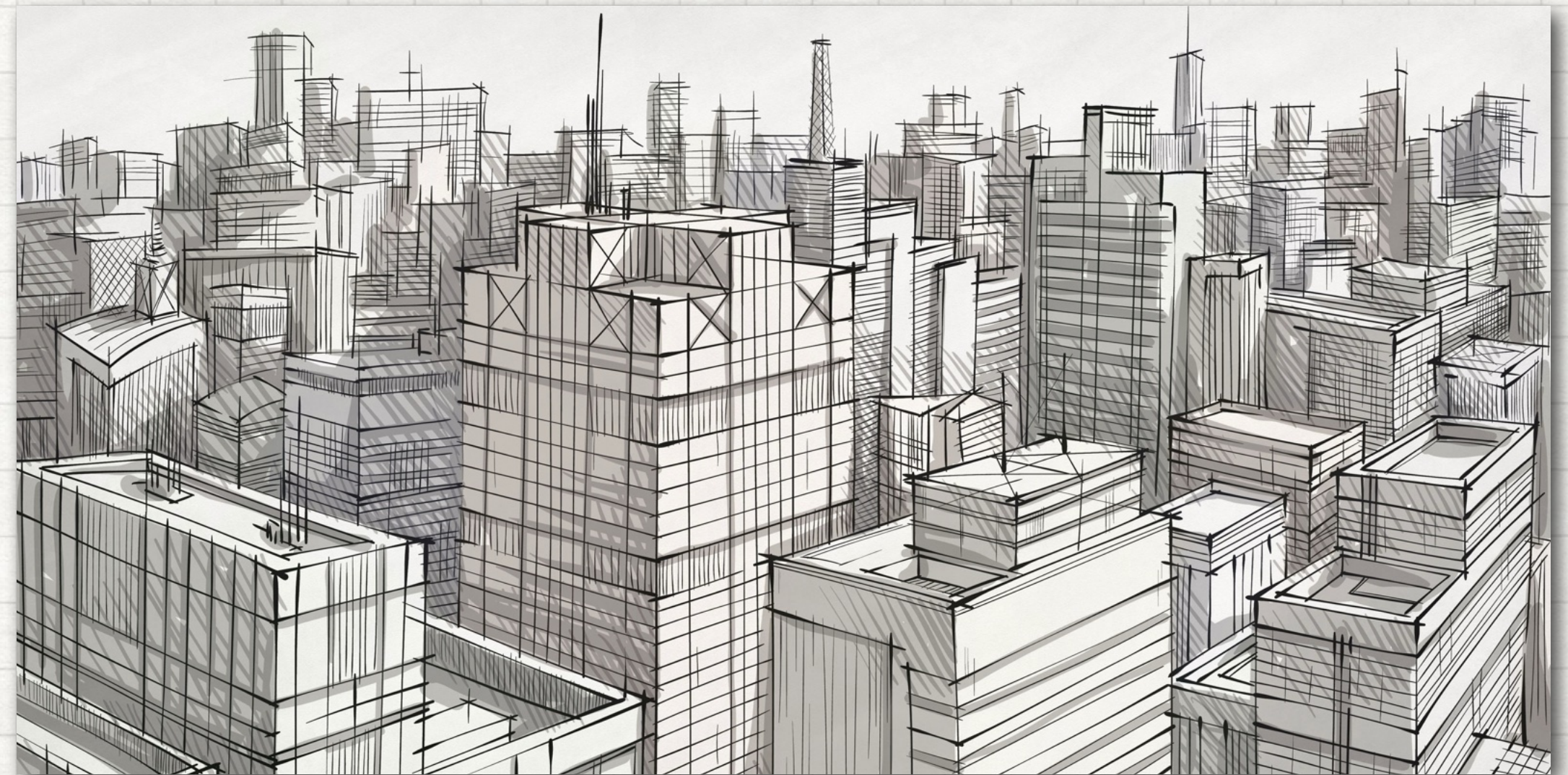
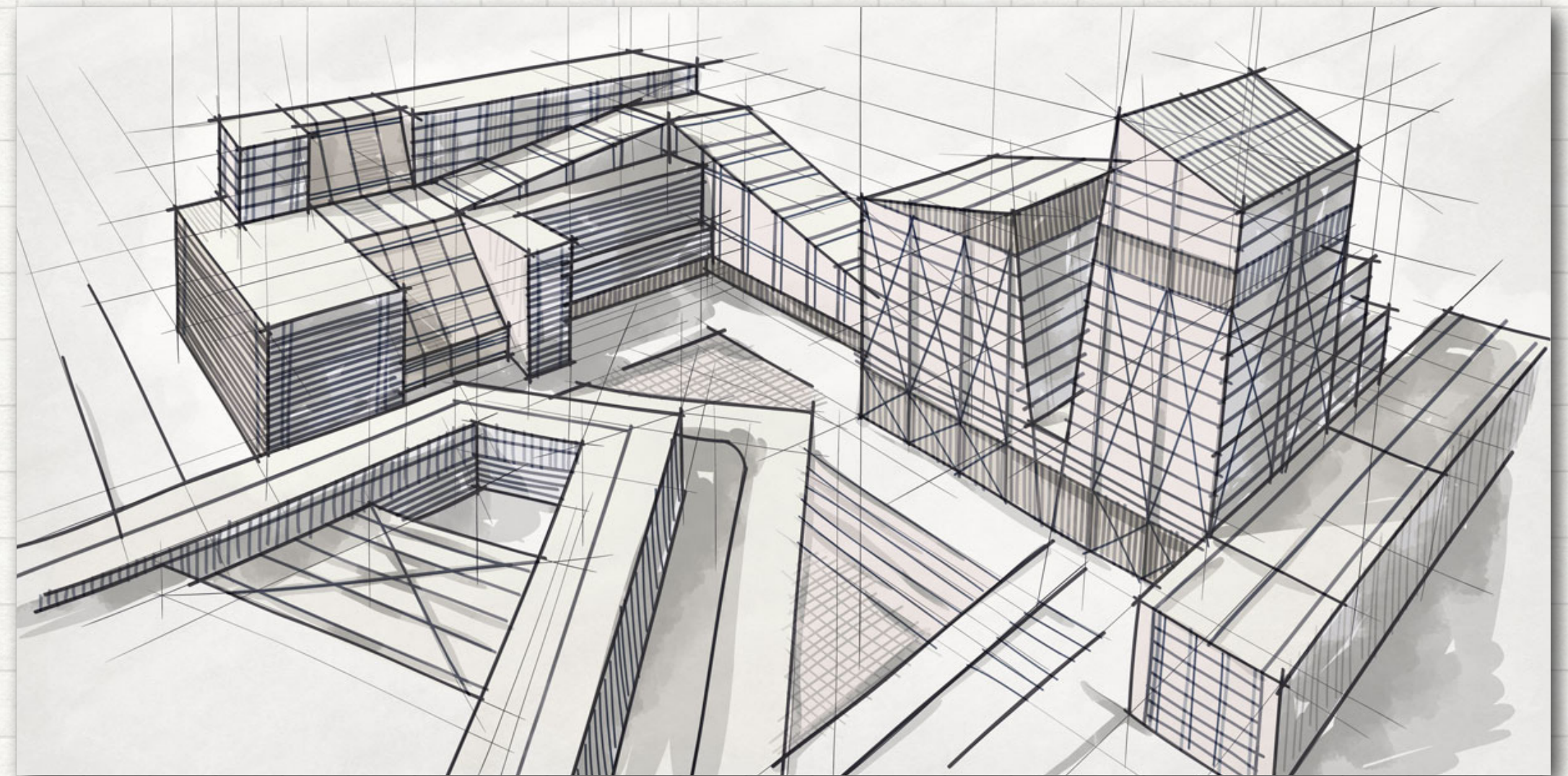


OKAY, ONE LAST TRY, WHY?



WE'RE PART OF A COMMUNITY  
WE'D LIKE TO BUILD CONSENSUS  
ABOUT A NEW IDEA  
WITH ANYONE.





# MARKDOWN

READABLE AND WRITEABLE SOURCE, AUTO-CONVERTIBLE

- Markdown
- Spec-Up tags
- Spec-Up-T preprocessing
- GitHub Pages presentation
- DocX and PDF make-over

AGAIN, WHY?

- 1.TEXT
- 2.IMAGES
- 3.REFERENCES
- 4.TERMS
- 5.SINGLE PAGE
- 6.WEBBASED
- 7.VERSIONED
- 8.HARVEST DEFINITIONS
- 9.NORMATIVE/INFORMATIVE LINKING
- 10.COMMANDLINE & GUI



# GITHUB PAGES

WEBPAGES, EDIT FUNCTIONALITY, ACTION SCRIPT, VERSIONED

- Git
- Remote and local
- Spec-Up-T preprocessing in GitHub Actions
- GitHub Pages presentation
- Up-time and global presence

## AGAIN, WHY?

- 1.TEXT
- 2.IMAGES
- 3.REFERENCES
- 4.TERMS
- 5.SINGLE PAGE
- 6.WEBBASED
- 7.VERSIONED
- 8.HARVEST DEFINITIONS
- 9.NORMATIVE/INFORMATIVE LINKING
- 10.COMMANDLINE & GUI



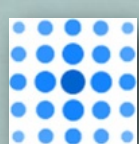
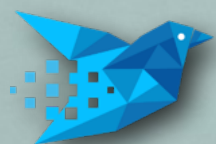
# SPEC-UP-T TAGS

DEF, REF, XREF, TREF, IREF, SPEC

- Define terms
- Reference terms locally
- XReference terms externally
- Transclude definitions (Tref)
- Use Tobie's spec clearinghouse

## AGAIN, WHY?

- 1.TEXT
- 2.IMAGES
- 3.REFERENCES
- 4.TERMS
- 5.SINGLE PAGE
- 6.WEBBASED
- 7.VERSIONED
- 8.HARVEST DEFINITIONS
- 9.NORMATIVE/INFORMATIVE LINKING
- 10.COMMANDLINE & GUI



# LINKING

- Reference and trust
- Link and pray
- Check broken links
- Spec-Up-T Health checks

## AGAIN, WHY?

- 1.TEXT
- 2.IMAGES
- 3.REFERENCES
- 4.TERMS
- 5.SINGLE PAGE
- 6.WEBBASED
- 7.VERSIONED
- 8.HARVEST DEFINITIONS
- 9.NORMATIVE/INFORMATIVE LINKING
- 10.COMMANDLINE & GUI



# WEB VERSION OF SPEC-UP-T


- Original Spec-Up: commandline
- GitHub standard functionality
- GitHub API custom-made functions
- GitHub Actions to generate
- User manual

## AGAIN, WHY?

- 1.TEXT
- 2.IMAGES
- 3.REFERENCES
- 4.TERMS
- 5.SINGLE PAGE
- 6.WEBBASED
- 7.VERSIONED
- 8.HARVEST DEFINITIONS
- 9.NORMATIVE/INFORMATIVE LINKING
- 10.COMMANDLINE & GUI



# WEB VERSION OF SPEC-UP-T

 Spec-Up-T Editor

Home

Logout

⊕ Create New Spec-Up-T Repository

Start a new specification repository with our guided setup wizard

Create Repository

🏠 Go To Existing Repository

GitHub Username/Organization

e.g., trustoverip

Repository Name

e.g., tswg-keri-specification

Branch

main

Access Repository

🕒 Recently Visited Repositories

ctwg-main-glossary

trustoverip

main

Yesterday

ctwg-main-glossary

trustoverip

henkvancann-patch-1

Yesterday

tswg-keri-specification

henkvancann

main

Yesterday

kerisuite-glossary

weboftrust

integrate

Yesterday

kerisuite-glossary

henkvancann

ctwg-main-glossary

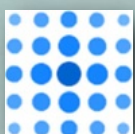

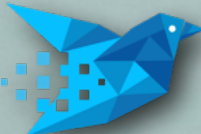
henkvancann

tswg-cesr-specification


henkvancann

tswg-acdc-specification

henkvancann



# WEB VERSION OF SPEC-UP-T

 Spec-Up-T Editor

Home Explorer Render View Config Logout

Editing: KERIs-algorithm-for-witness-agreement.md

Unpublish Commit Close

henkvancann/tswg-keri-specification • tov1

Simple Technical Preview Split View

Simple Terms Editor

Term

keris-algorithm-for-witness-agree

Aliases

KERI's Algorithn

+ Add Alias

KAWA

+ Add Alias

Enter alias

+ Add Alias

Type

Local (def)

External (tref)

keri1

Browse

Definition

<external term definition, see "Preview" tab>

External

B

I

Write the definition content here...

Technical Editor

B

I

Terms

To Notepad

Help

1

[[tref: keri1, keris-algorithm-for-witness-agreement, KERI's Algorithm for Witness Agreement, KAWA]]

2

Preview

Refresh Terms

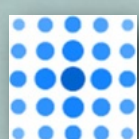
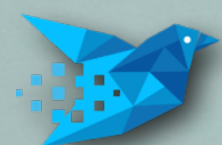
keris-algorithm-for-witness-agreement (KERI's Algorithm for Witness Agreement, KAWA)

External

a type of Byzantine Fault Tolerant (byzantine-fault-tolerance) algorithm.

Source: Dr. S.Smith

More in extended KERI glossary



# [[def:]]



- Term in Key format
- How do you spell it
- Abbreviations and other aliases
- ~ {definition text}

You READ the full text  
On click you GO TO links

## Example

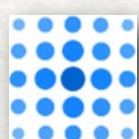
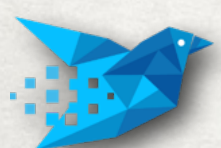
[[def: self-certifying-identifier, Self  
Certifying Identifier, SCID]]

- Key = <lowercase and - in between>
- Optional: Alias 1 = how the term will be presented
- Optional: Alias 2..n = how you can reference the term definition
- ~ definition text

§ **JSON Serialization** (rfc7515, *JSON-serialization*)  

① ② ③

See <https://datatracker.ietf.org/doc/html/rfc7515#section-3.2> .



# [[tref:]]

(*transclusion reference/definition*)

- Mnemonic Specification
- Term in Key format
- How do you spell it
- Abbreviations and other aliases
- ~ {definition text}

You READ the full text  
On click you GO TO links

## Example

[[tref: toip1, self-certifying-identifier, Self  
Certifying Identifier, SCID]]

- Spec = toip1 (*defined in specs.json*)
- Key = <lowercase and - in between>
- Optional: Alias 1 = how the term will be presented. Alias 2..n = how you can reference the term transclusion

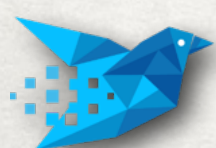
(authenticity), content protection (confidentiality), and may support privacy via uncorrelatable or pseudonymous metadata.

§ ➞ **First-seen** (First seen, *first-seen*)

an entity or component that keeps a copy of a kerl for an identifier but that is not designated by the controller of the identifier as one of its witnesses. See annex watcher.



refers to the first instance of a [message](#) received by any [witness](#) or [watcher](#). The first-seen event is always seen, and can never be unseen. It forms the basis for [duplicity](#) detection in KERI-based systems.



# [[xref:]]

(external reference)

- Mnemonic Specification
- Term in Key format
- How do you spell it
- Pop-up definition text

On hover, you READ the POP UP  
On click you GO TO either the main link  
or a link within the pop-up

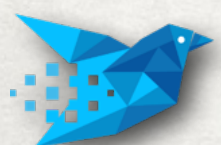
## Example

[[xref: toip1, self-certifying-identifier,  
SCID]]

- Spec = toip1 (*defined in specs.json*)
- Key = <lowercase and - in between>
- Optional: Alias 1 = how the term will be presented

## Supporting definitions:

- General IT: identifier ,



# [[ref:]]

- Term or alias
- Pop-up definition text

## Example

[[ref: SCID]]

- Payload = key or alias
- Will match a def or tref !!

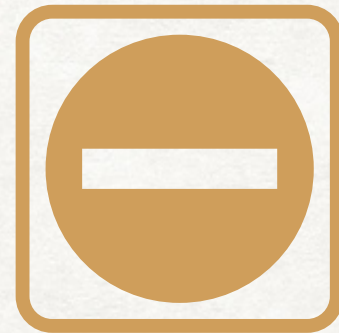
On hover, you READ the POP UP

On click you GO TO either the main link or a popped-up link

[[def:]]



[[tref:]]



[[ref:]]



[[xref:]]



URL





§ **identifier**  

① ② ③

A single attribute—typically a character string—that uniquely identifies an entity within a specific context (which may be a global context). Examples include the name of a party, the URL of an organization, or a serial number for a man-made thing.

Supporting definitions:

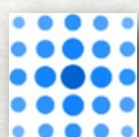
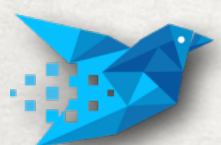
- General IT: [identifier](#) ,
- Trust-over-IP: [identifier](#) .

§ **inception event** (inception events, *inception-event*)  

① ② ③

A key event that provides the incepting information needed to derive an [AID](#) and establish its initial [key state](#), as defined by the [KERI specification](#).

More: [WebOfTrust glossary](#) .



# [[iref:]]

- Term or alias
- Inline inclusion of definition text

You READ the definition from the glossary again

No anchor

On click, you GO TO the provided links, also in the pop-up text

## Example

[[iref: pre-rotation]]

- Payload = key or alias
- Will match a def or tref !!

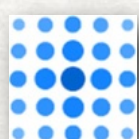
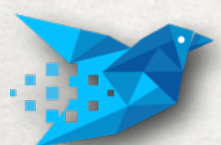
**JSON Serialization (rfc7515, JSON-serialization)**  GLOSSARY

See <https://datatracker.ietf.org/doc/html/rfc7515#section-3.2> .

§ **JSON Serialization** (rfc7515, *JSON-serialization*)  

① ② ③

See <https://datatracker.ietf.org/doc/html/rfc7515#section-3.2> .



**[link](URL)**

**[link](#anchor)**

- Markdown and Html
- No Pop-up
- No versioning
- Yes, broken link checking

On click you GO TO links

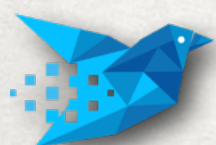
## Examples

Source [wikipedia]([https://en.wikipedia.org/wiki/Autonomic\\_computing](https://en.wikipedia.org/wiki/Autonomic_computing))

[RFC2119](#RFC2119)

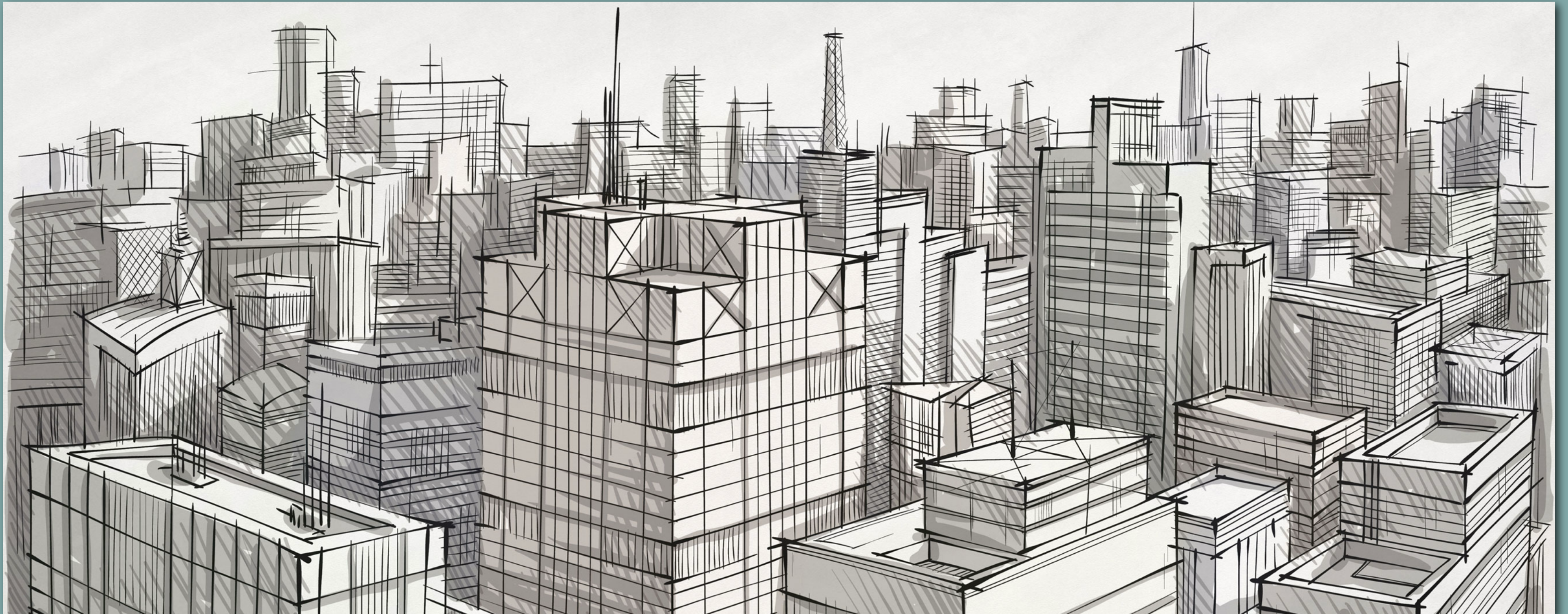
[Seals](./tools/#deep-dive-into-seals)

- Payload = a link
- As is; so outdated at first use



# SPEC-UP-T ECOSYSTEMS

## HOW CONSENSUS AND FREEDOM WORK TOGETHER



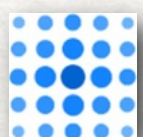
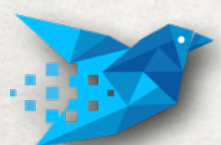
# SERVICE

## SPEC-UP-T SPECIFICATION INTEGRATED WITH GLOSSARIES

- Project install & configuration
- Data intake and processing
- Education (3 online workshops)
- Custom development (optional)



Acknowledgement: picture from [Expressdata.co.uk](https://www.expressdata.co.uk) - CC4.0



# WHAT IS A TECHNICAL SPECIFICATION?

## TEXT, GLOSSARY, INLINE REFERENCES AND BIBLIOGRAPHY

- Text in markdown
- Images in markdown
- Extension in markdown (example mermaid)
- Specific tags in Spec-Up-T
- A glossary section
- External glossaries declared in specs.json
- Terms & definitions directory
- A GitHub repo
- Git commits locally or remotely



# WHAT IS A WEB-BASED SINGLE-PAGE?

## STATIC PAGE GENERATION WITH GITHUB ACTIONS AND PAGES

- Spec-up-T is built in Node.JS and NPM
- All changes are versioned using git
- All external references are backed up with local fallbacks
- *Broken link analysis pre- and post-generation*
- Healthcheck of the spec in its ecosystem
- A command-line menu to edit and test: generates a local index.html file.
- GitHub Actions to generate the Pages site remotely
- The single source of truth is the production version of any spec or glossary based on Spec-Up-T



# WHAT IS HARVESTING AND LINKING?

REUSE DEFINITIONS THAT FIT IN CONTEXT AND LINK TO NORMATIVE AND INFORMATIVE SOURCES

- Spec-up-T `[[tref]]` and `[[xref]]`
- Spec-up-T `[[spec]]` (*trust involved*)
- Markdown
- Html
- Broken links report during generation
- Broken links report in production



# WHAT IS COMMAND-LINE AND WEB-BASED?

ANYONE WITH A GITHUB ACCOUNT SHOULD BE ABLE TO MANAGE SPEC-UP-T-BASED SPECIFICATIONS AND GLOSSARIES

- Command-line is an option
- Web-based is GitHub-based
- User rights determine workflow
- Teamwork: Git workflow and governance rules on top
- Healthchecks: consistency



“

WE'VE MANAGED TERMINOLOGY HELL  
ON THE INTERNET.

— *Henk van Cann*

”

