New approach to license compatibility

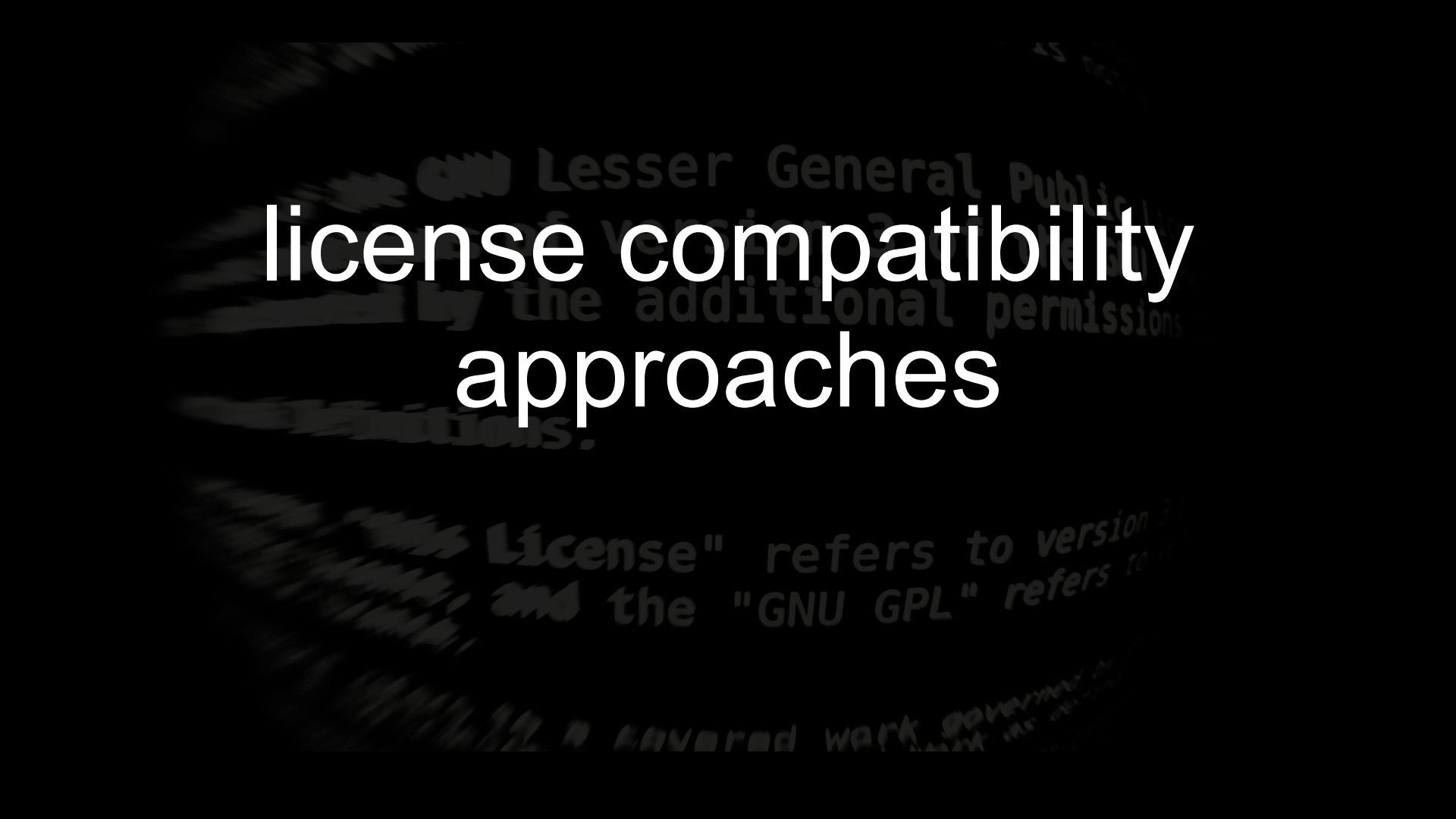
Henrik Sandklef

Compatibility is not compliance
Compliance is not FOSS
FOSS is the best!

me

Information is not knowledge
Knowledge is not wisdom
Wisdom is not truth
Truth is not beauty
Beauty is not love
Love is not music
Music is the best!

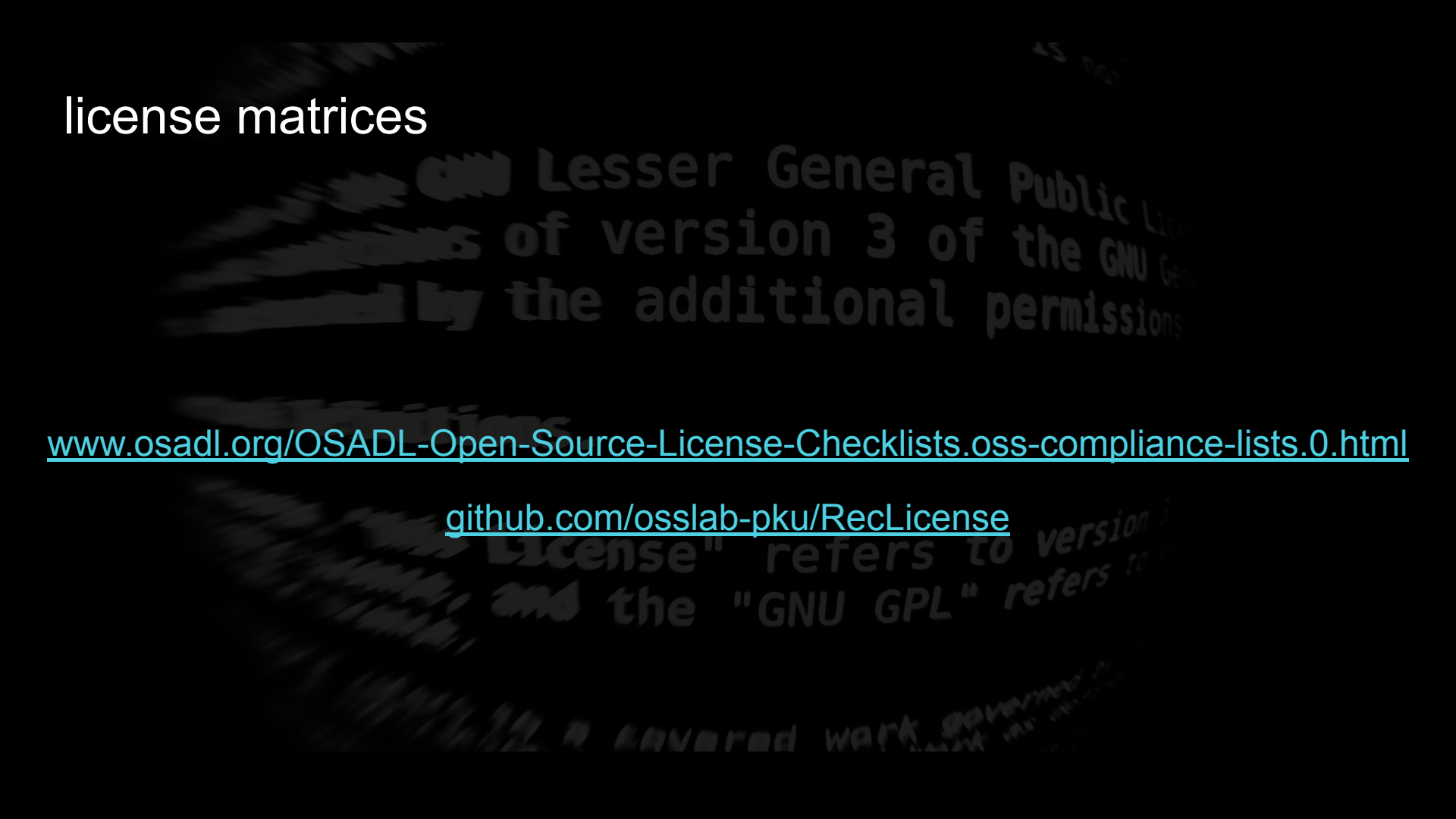
Frank Zappa
Packard Goose (Joe's Garage: Acts I, II & III)



license compatibility approaches

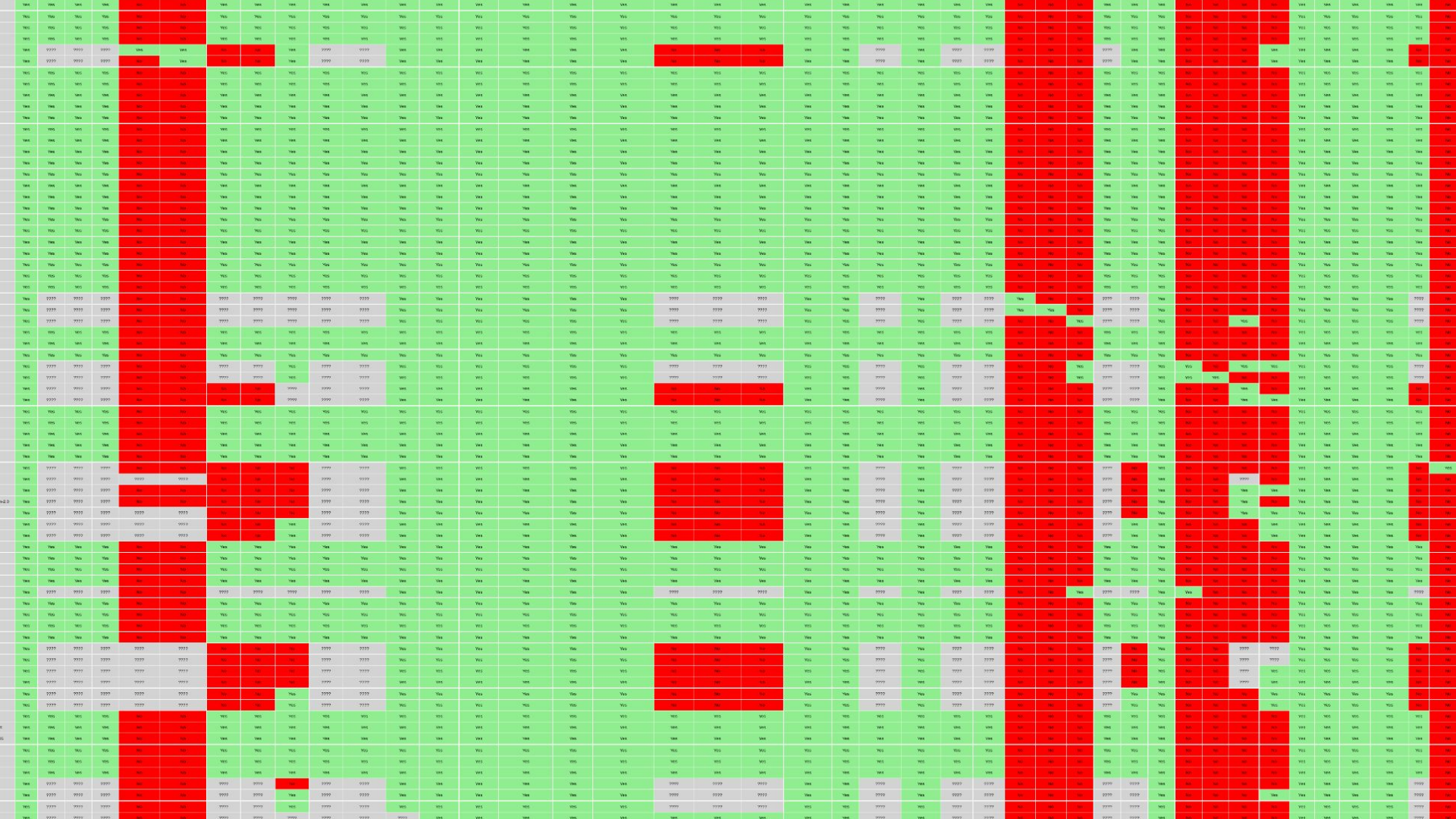
Where are we now?

license matrices



www.osadl.org/OSADL-Open-Source-License-Checklists.oss-compliance-lists.0.html

github.com/osslab-pku/RecLicense



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b) The work must carry prominent notices stating that it is released under this License and any conditions added
under section 7. This requirement modifies the requirement in section 4 to “keep intact all notices”.
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work with other separate and independent works, which are not by their nature extensions of the covered work,
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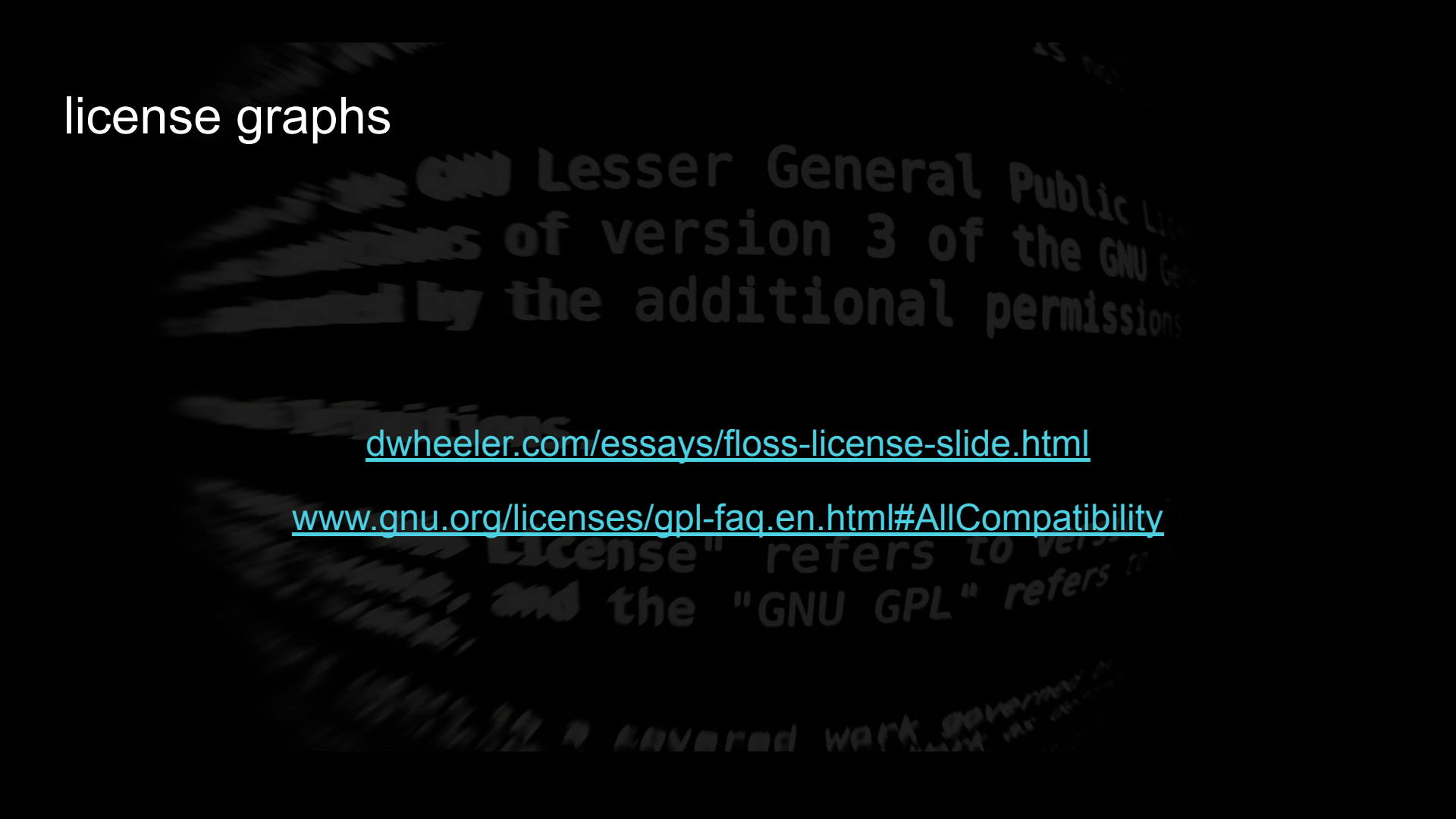
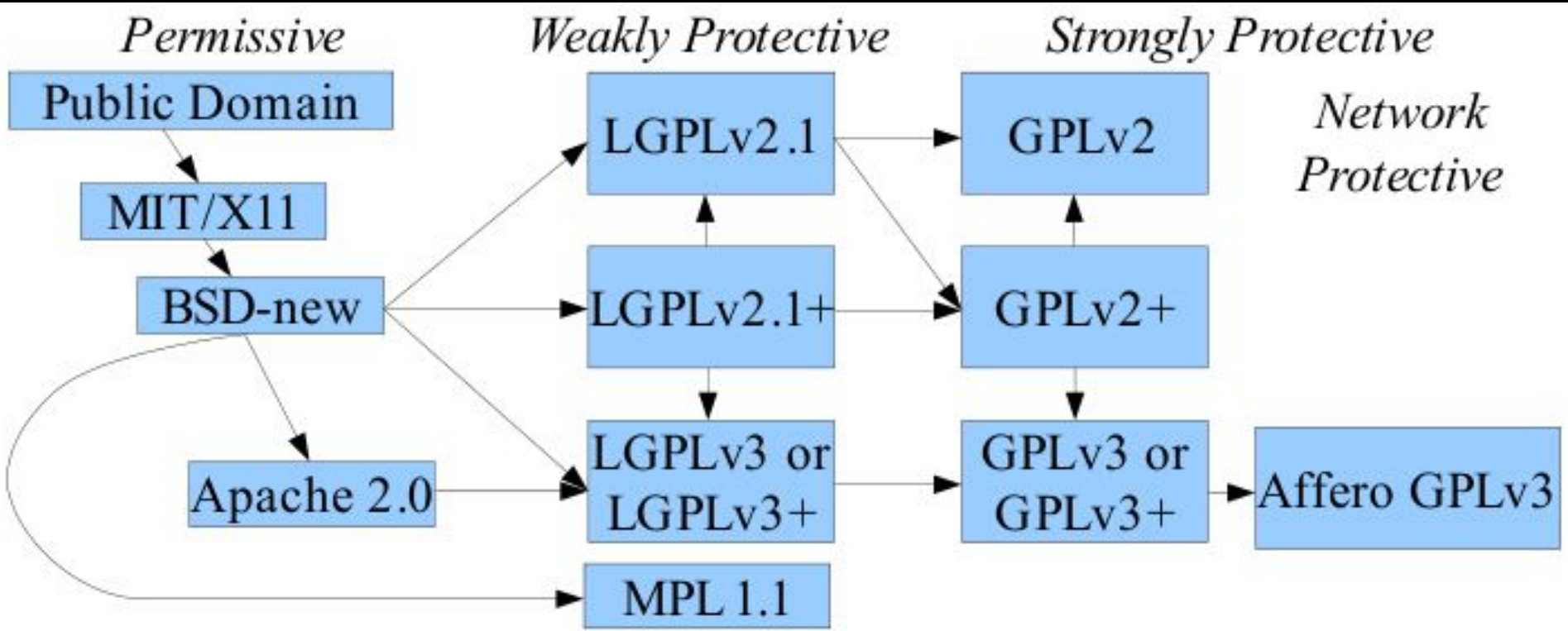
or distribution medium, is called an “aggregate” if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond
what the individual works permit. Inclusion of a covered work in an aggregate does not cause this
License to apply to the other parts of the aggregate.
6. Conveying Non-Source Forms.
You may convey a covered work in object code form under the terms of sections 4 and 5, provided
that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:
a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium),
accompanied by the Corresponding Source fixed on a durable physical medium customarily
used for software interchange.
b) Convey the object code in, or embodied in, a physical product (including a physical
distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as
you offer spare parts or customer support for
that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the
software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a

license graphs



dwheeler.com/essays/floss-license-slide.html

www.gnu.org/licenses/gpl-faq.en.html#AllCompatibility



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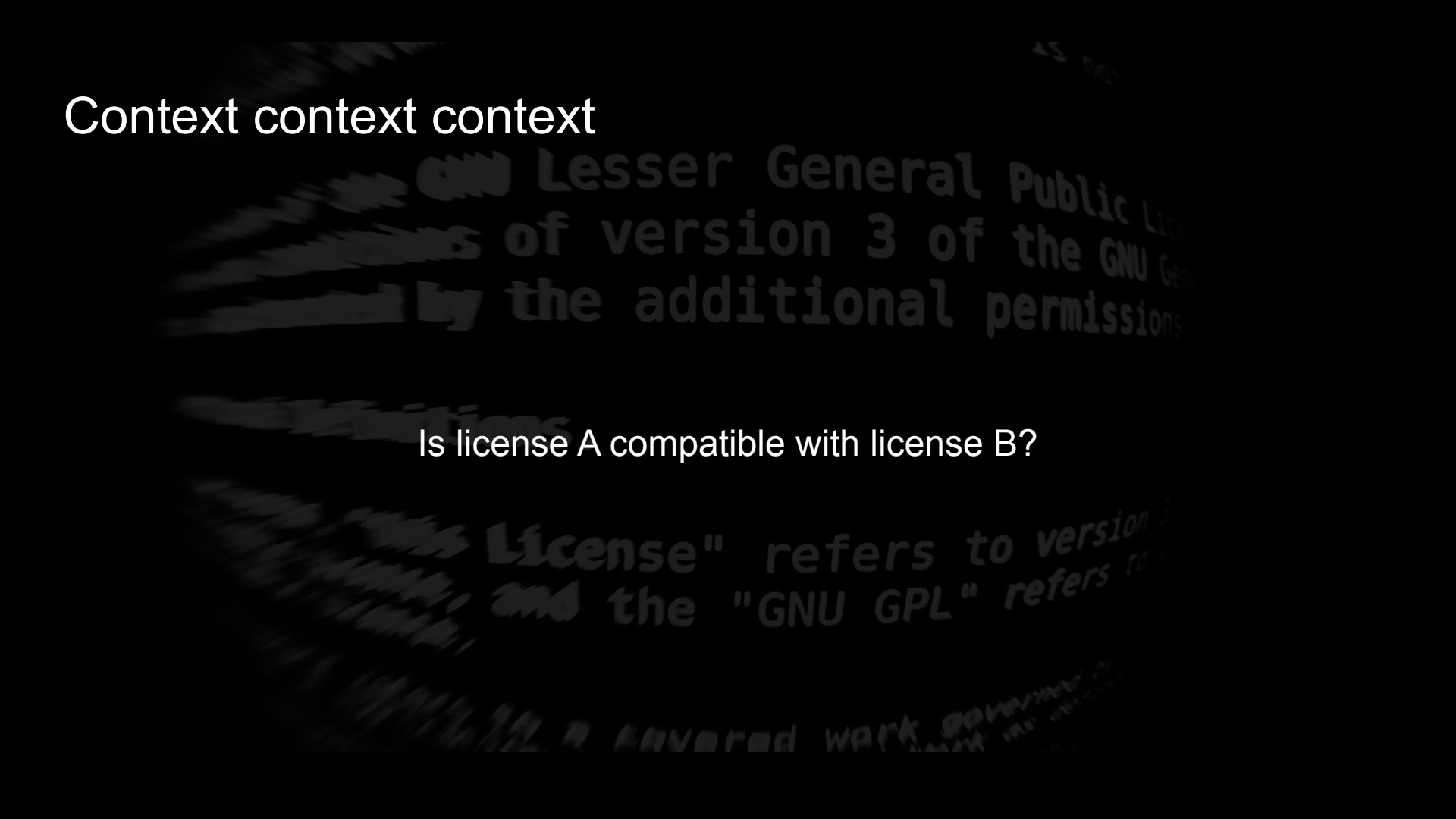
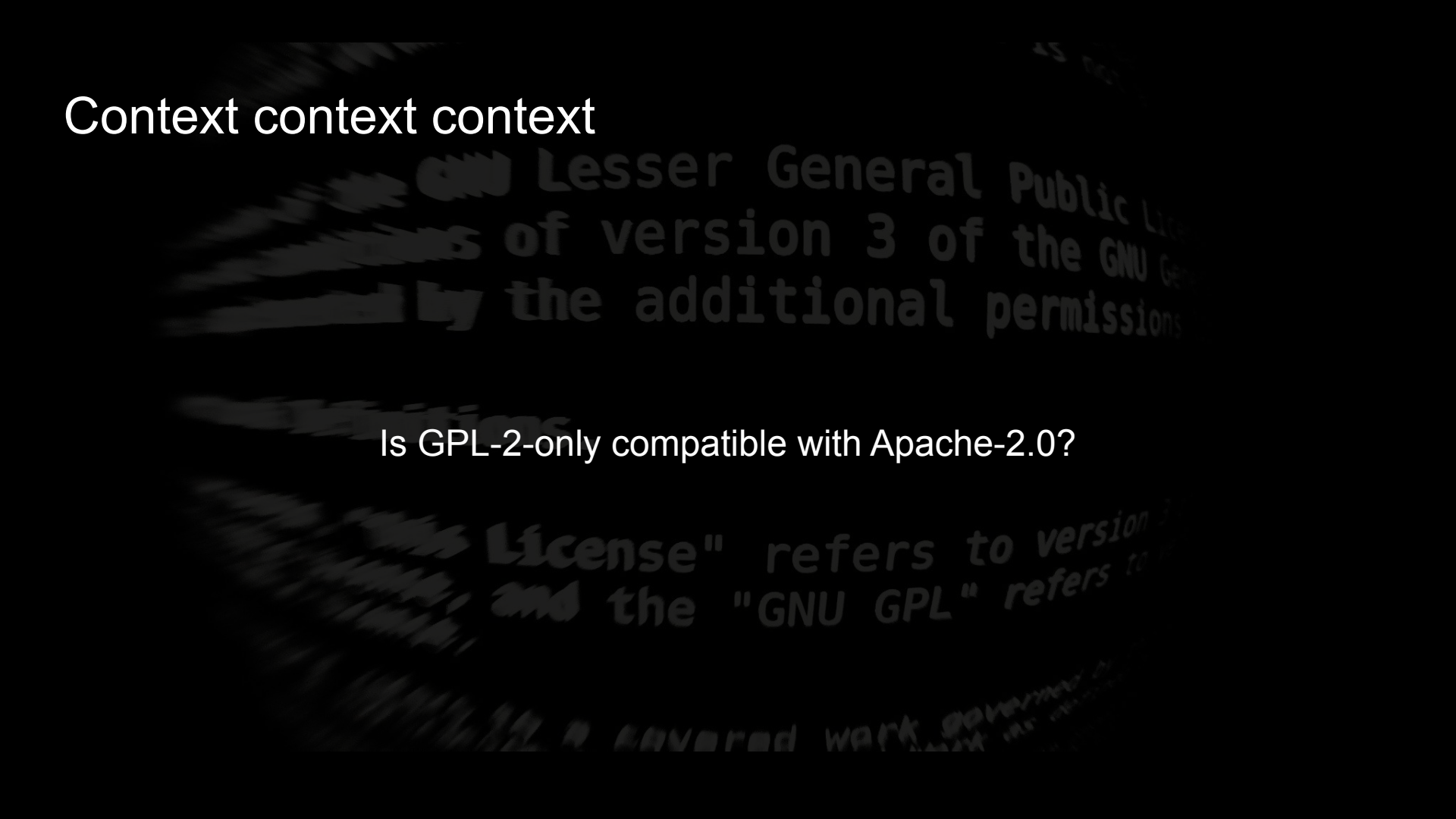
Context context context



Is license A compatible with license B?

Context context context



Is GPL-2-only compatible with Apache-2.0?

Provisioning case

The way a software is provided to a user

- binary-dist
- source-dist
- SaaS
- managed-service (REST)
- in-vehicle
- …..

Use case

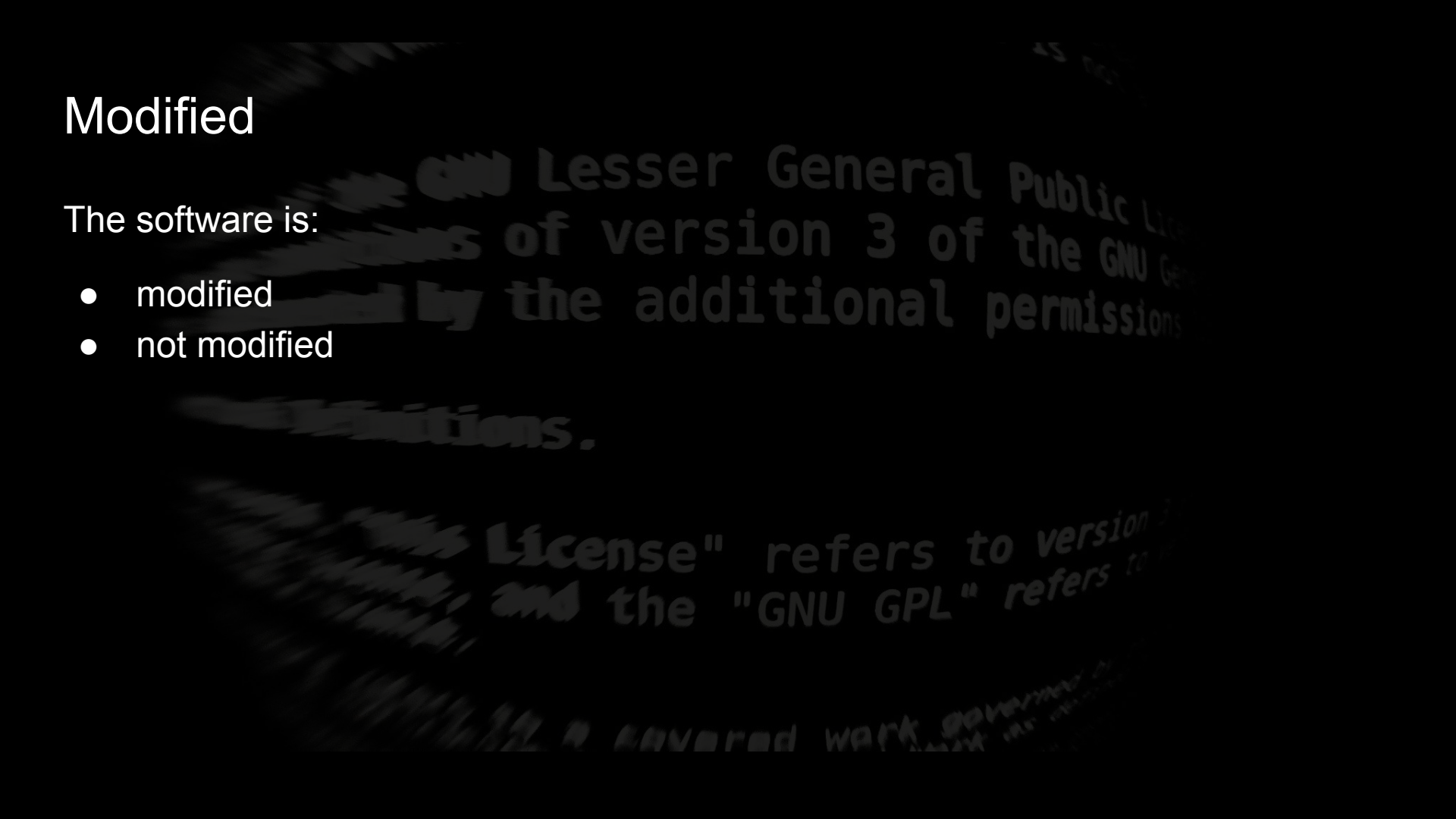
The way a software is used

- compiler (e.g. gcc/g++, autoconf …)
- library (e.g. libcairo.so, log4j.jar)
- program or daemon (e.g. Apache web server, gstreamer …)
- snippet (OSADL’s matrix does this)
- tool (e.g. bash)

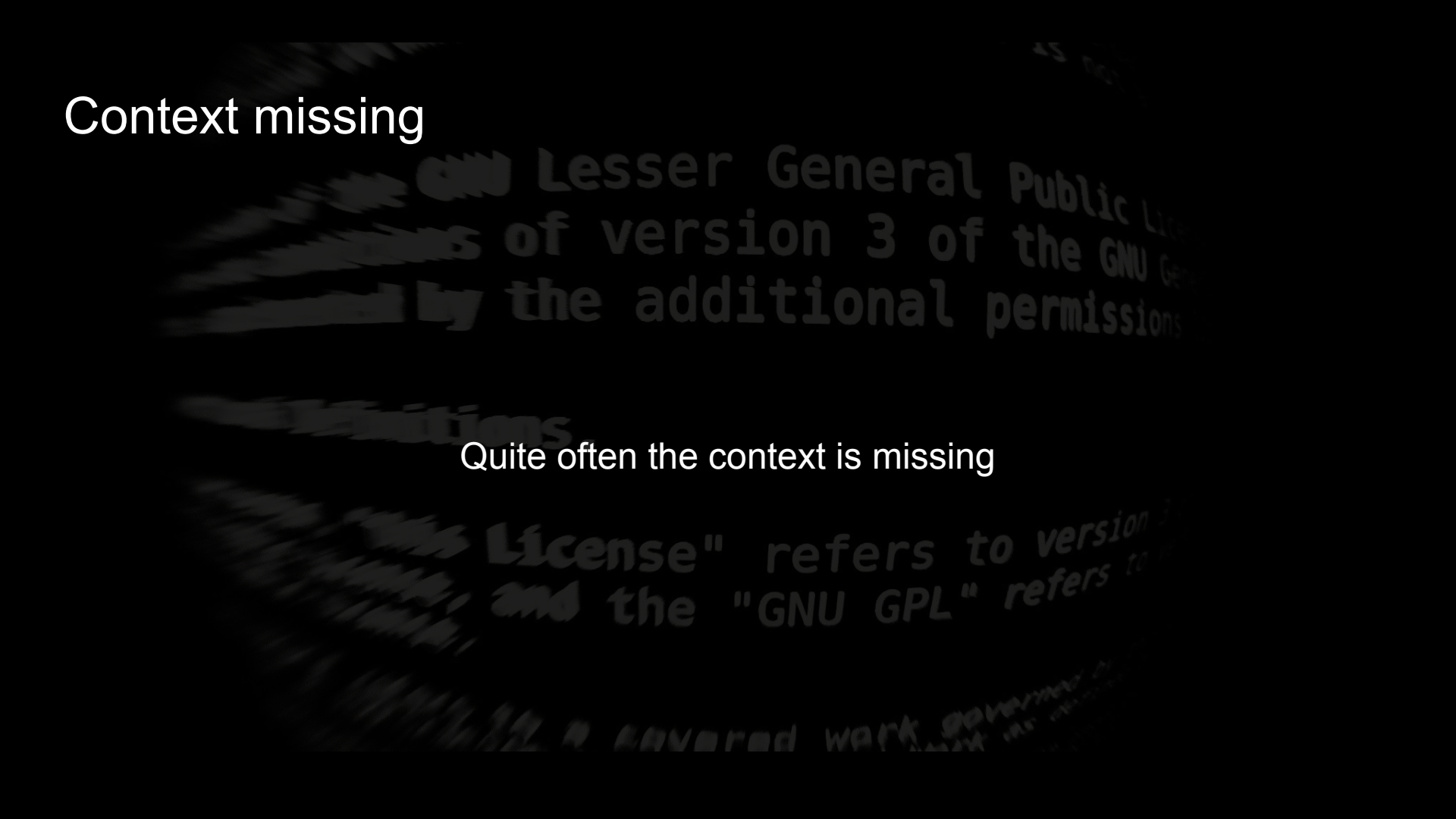
Modified

The software is:

- modified
- not modified



Context missing



Quite often the context is missing

Looking ahead

What is a license?

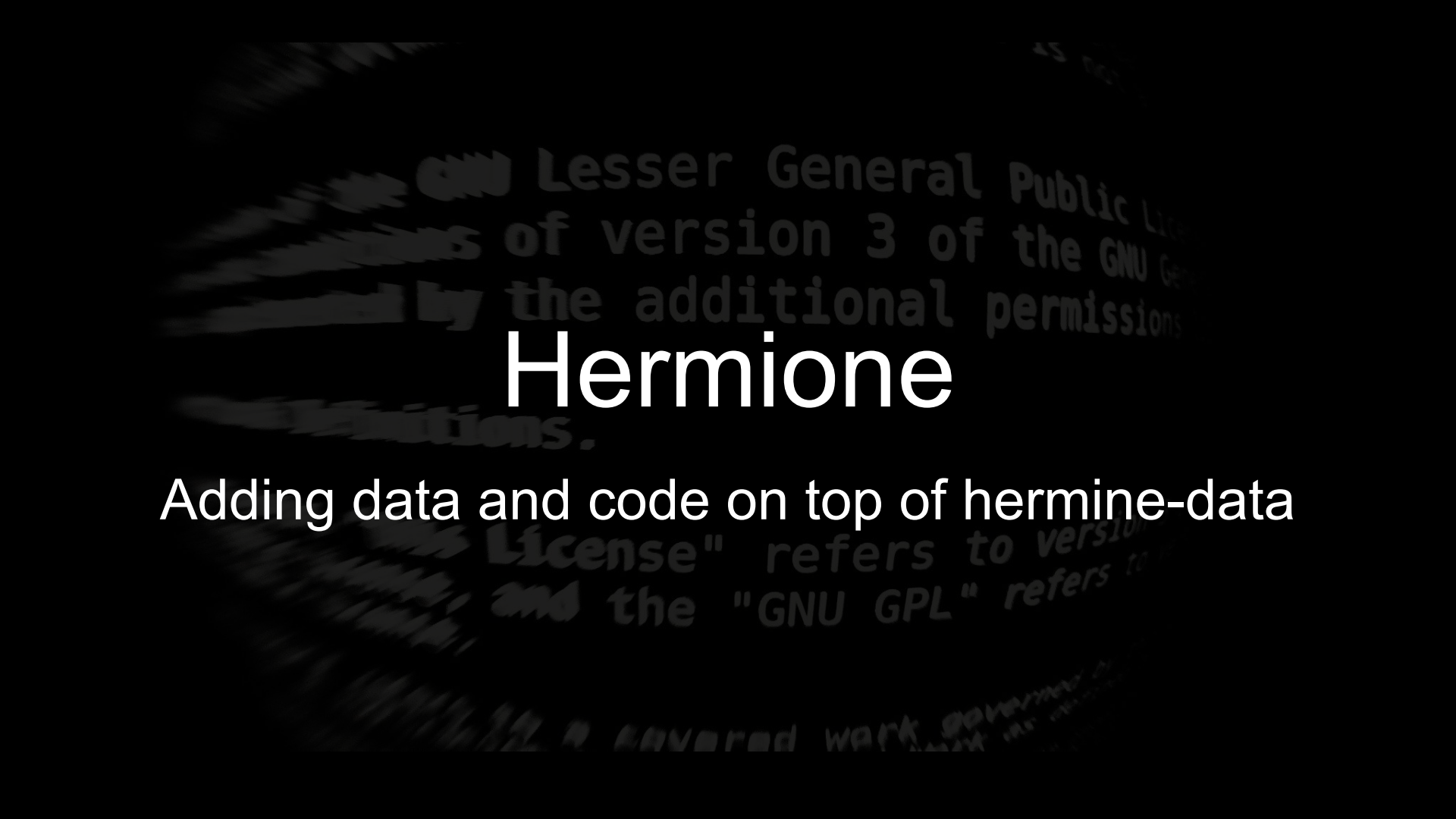
License

List of clauses/obligations and when the clause is triggered (provisioning case)

- provide copyright statement [“binary-dist”, “source-dist”]
- provide license text [“binary-dist”, “source-dist”]
- …..

Lesser General Public
of version 3 of the
by the additional permissions.

Hermione



Hermione

Adding data and code on top of hermine-data

Proof Of Concept

Hermine

Classified licenses

- with obligations

Hermione

Obligation compatibilities

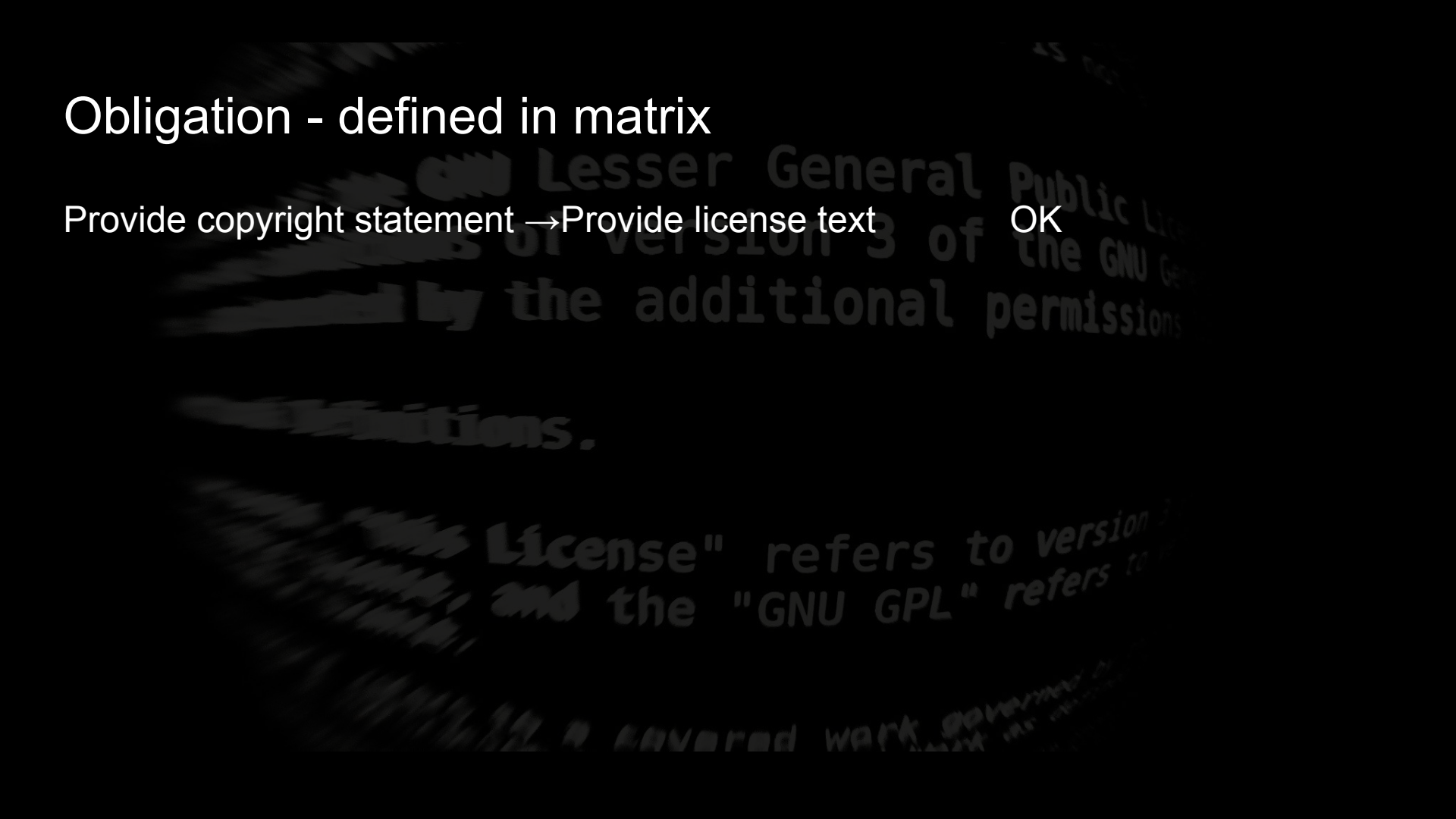
Note: Hermine does a lot more than the above

Obligation Matrix

	O1	**O2**	**...**	**On**
O1	same	no	…	yes
O2	yes	same	…	no
...	…	…	…	…
On	implementation	implementation	…	same

Obligation - defined in matrix

Provide copyright statement →Provide license text OK



Obligation - defined in code

BSD-3-Clause → GPL-2.0-only

BSD-3-Clause →Copyleft-strong

- If **inbound license** same as **outbound license**: OK
- else: **Not OK**

Obligation - defined in code

GPL-2.0-only →Apache-2.0

No further restrictions →Provide license text

If inbound obligation (Provide license text) already is in outbound license: OK

else: Not OK

Obligation - defined in code

GPL-2.0-only →Apache-2.0

No further restrictions →Patent clause

If inbound obligation (e.g. “Provide license text”) already is in outbound license: OK - else: Not OK

What’s added

Obligation matrix with

- Values
- License expressions - using an obligation notification

Exceptions

Restricted value (think GPL-2.0-only and Apache-2.0)

Dual license expanded sometime (e.g. GPL-2.0-or-later)

What’s added - Obligation notification examples

```
"Do not restrict the rights of the license": {
  "outbound_expression": "inbound_obligation is not a restriction"
}
```

From a User Point Of View

User provides

- Use-case
- Provisioning case
- Modified
- Inbound license
- Outbound license

User gets

- Compatibility
- or list of problems

Results - what do we get and what do we pay?

Only 15 (not 900) values or obligation expressions to maintain

Generates a license compatibility matrix (faster lookups)

Correct, compared to other license compatibility resources

Winning readability / maintainability

Losing precision

Acknowledgements

Hermine project https://hermine-foss.org/

Hermione project https://github.com/hesa/hermione (in a week or so)

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Links from the slides:

www.osadl.org/OSADL-Open-Source-License-Checklists.oss-compliance-lists.0.html

github.com/osslab-pku/RecLicense

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