



groonga storage engine

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About me

- ★ The president of ClearCode Inc.
- ★ The author of Rabbit
- ★ A developer of groonga
- ★ A developer of groonga storage engine



groonga storage engine?

- ★ A storage engine of MySQL
- ★ Fast fulltext search
- ★ Fast geo search
- ★ Real-time update



Storage engine

- ★ A storage engine of MySQL
- ★ Fast fulltext search
- ★ Fast geo search
- ★ Real-time update

MySQL client

SQL ↓


SQL handler

MySQL server

↓ ↑ C++ API ↓ ↑

storage engine

MyISAM InnoDB **groonga storage engine**

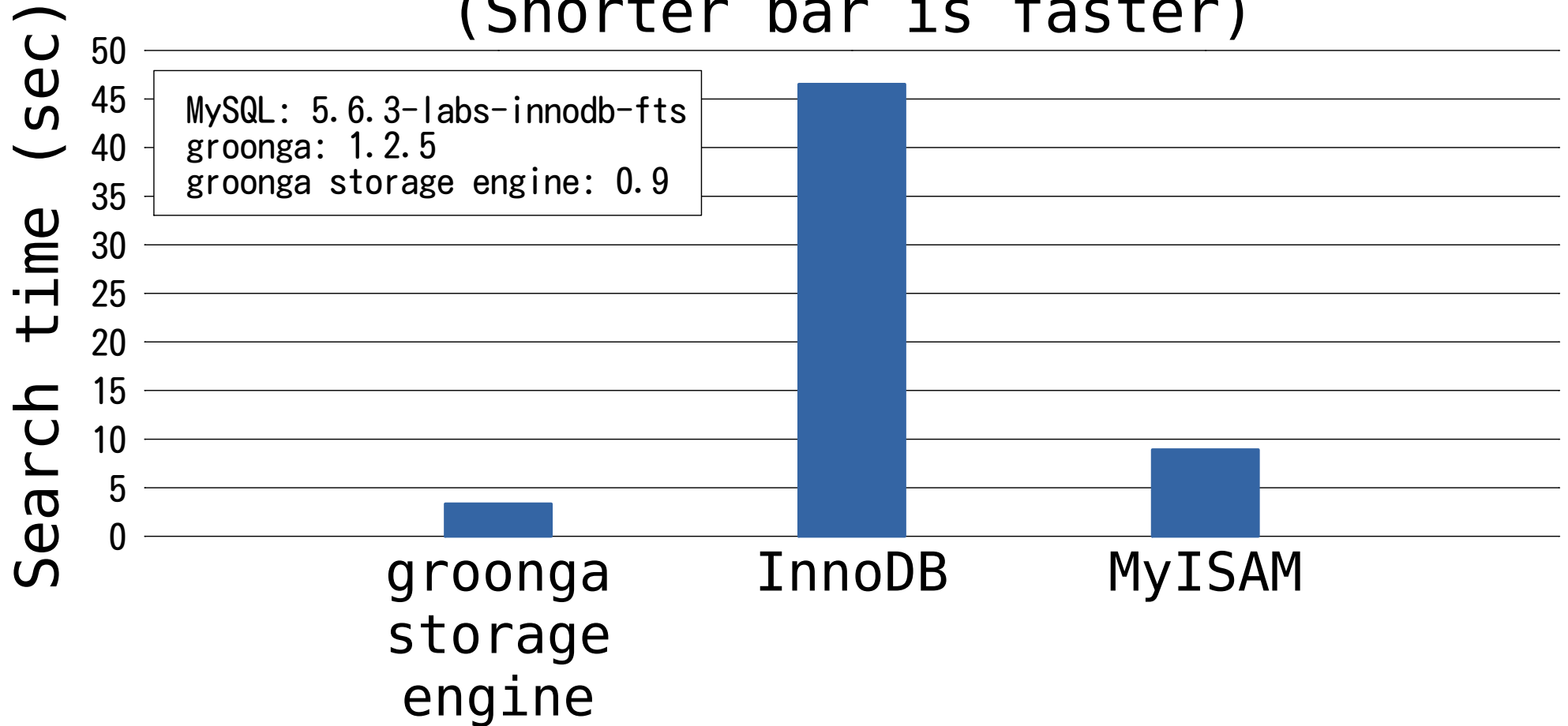

An alternative of MyISAM, InnoDB and so on



Fast fulltext search

- ★ A storage engine of MySQL
- ★ Fast fulltext search
- ★ Fast geo search
- ★ Real-time update

Elapsed time for 10,000 phrase searches
against 1 million tweets
(Shorter bar is faster)

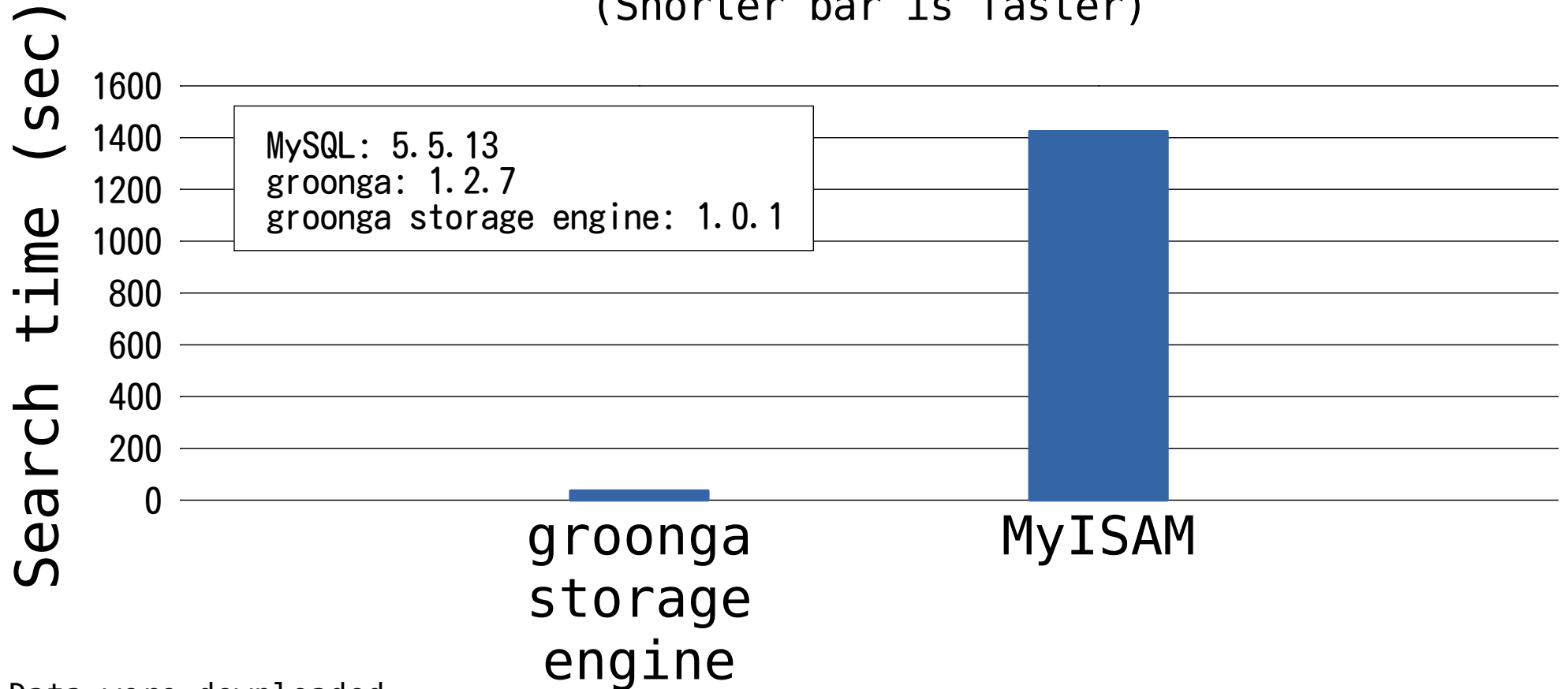




Fast geo search

- ★ A storage engine of MySQL
- ★ Fast fulltext search
- ★ Fast geo search
- ★ Real-time update

Elapsed time for 1,000 MBRContains + ORDER BY searches
against 11 million addresses
(Shorter bar is faster)



Data were downloaded
from location reference information
download service by MLIT at 2010
<http://nlftp.mlit.go.jp/isj/>



Real-time update

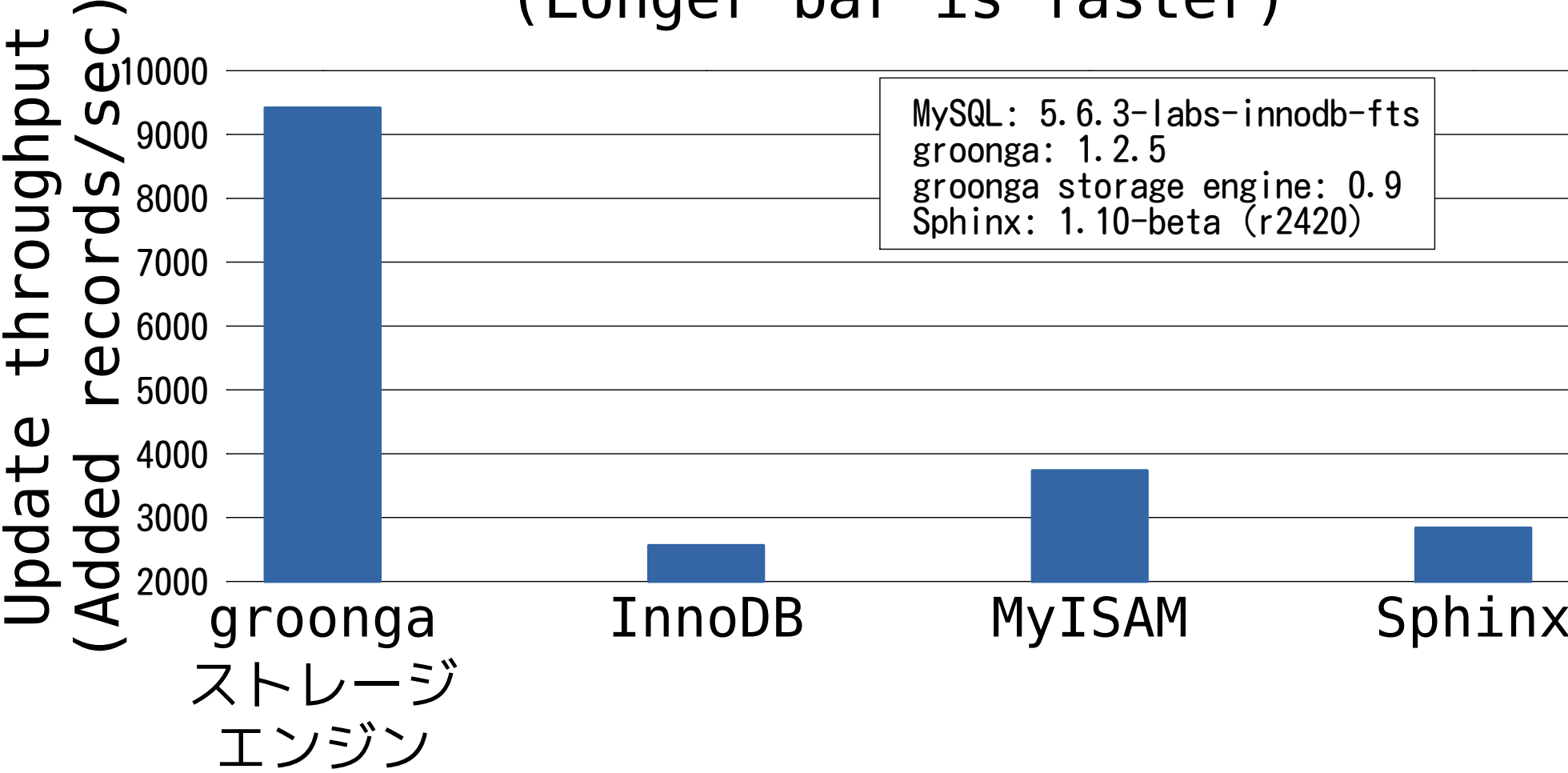
- ★ A storage engine of MySQL
- ★ Fast fulltext search
- ★ Fast geo search
- ★ Real-time update
 - ★ Fast update
 - ★ Lock free



Fast update

- ✦ A storage engine of MySQL
- ✦ Fast fulltext search
- ✦ Fast geo search
- ✦ Real-time update
 - ✦ Fast update
 - ✦ Lock free

Update throughput (Longer bar is faster)

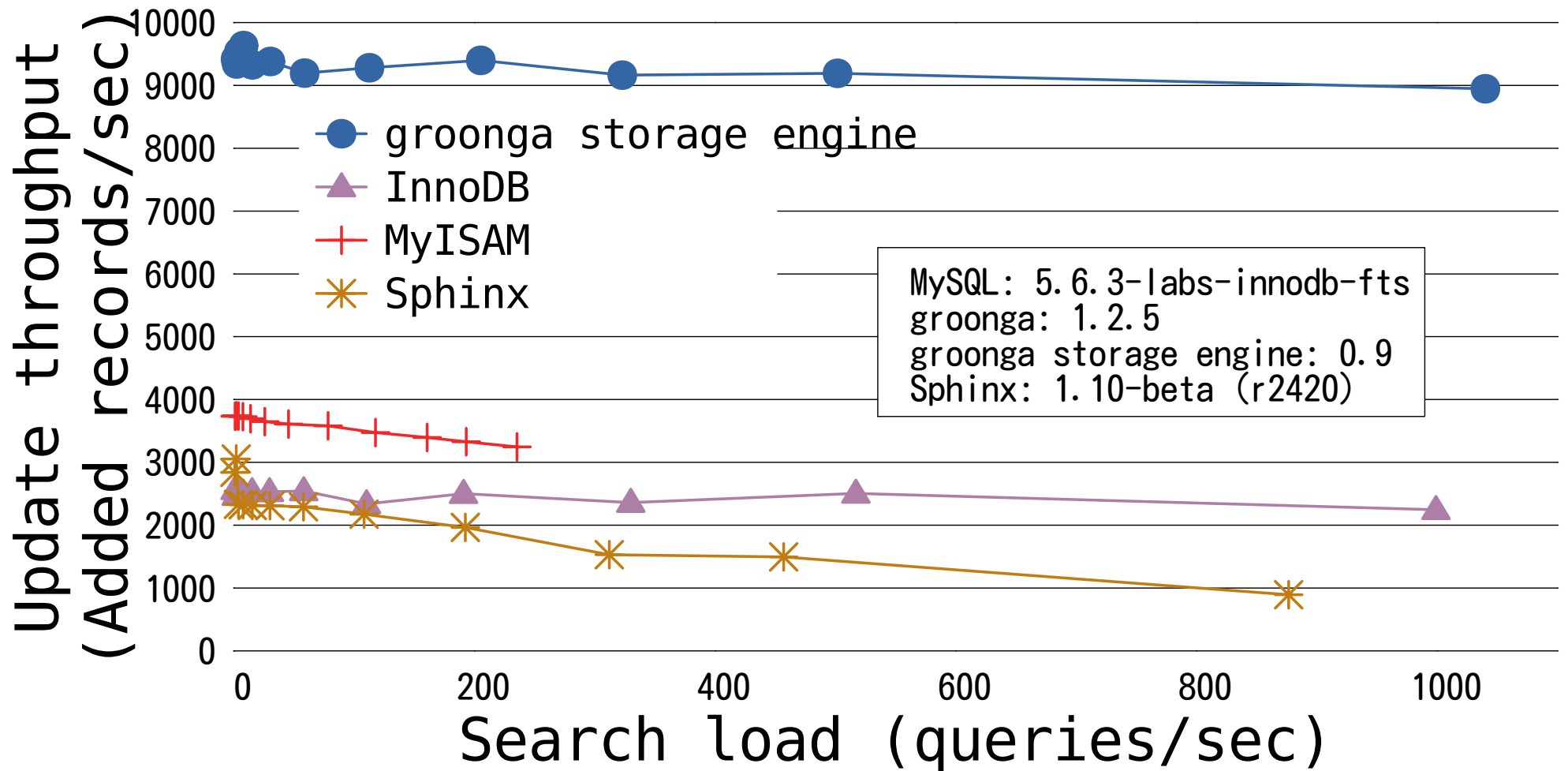




Lock free

- ★ A storage engine of MySQL
- ★ Fast fulltext search
- ★ Fast geo search
- ★ Real-time update
 - ★ Fast update
 - ★ Lock free

(Horizontal line means
fast update with searching)





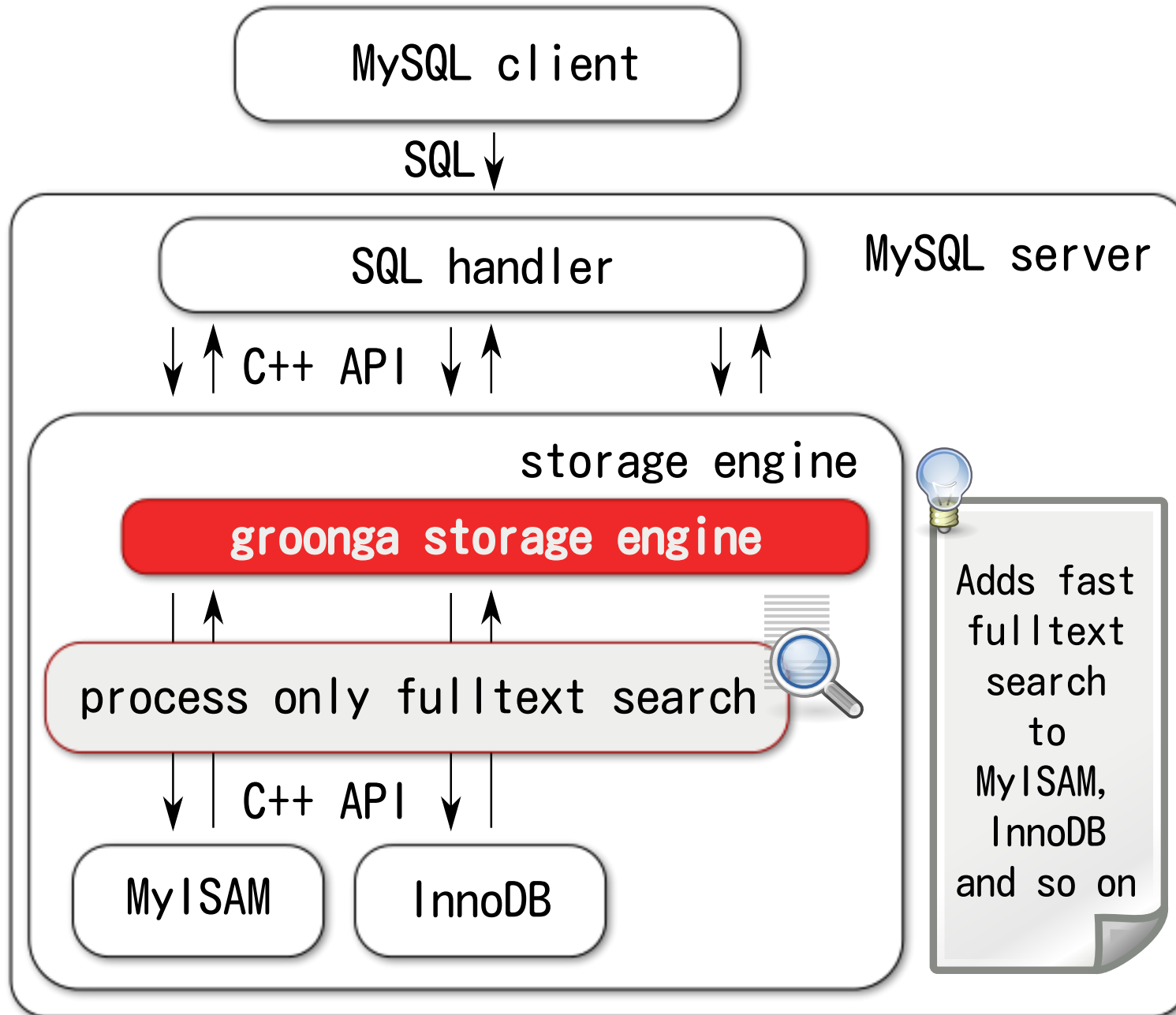
Caution

- ★ No transaction
- ★ ALTER TABLE is unsupported
 - ★ It will be supported in the next release
- ★ Geo supports only POINT



Transaction support

- ✦ Transaction support
 - ✦ groonga storage engine + InnoDB
- ✦ ALTER TABLE is unsupported
 - ✦ It will be supported in the next release
- ✦ Geo supports only POINT

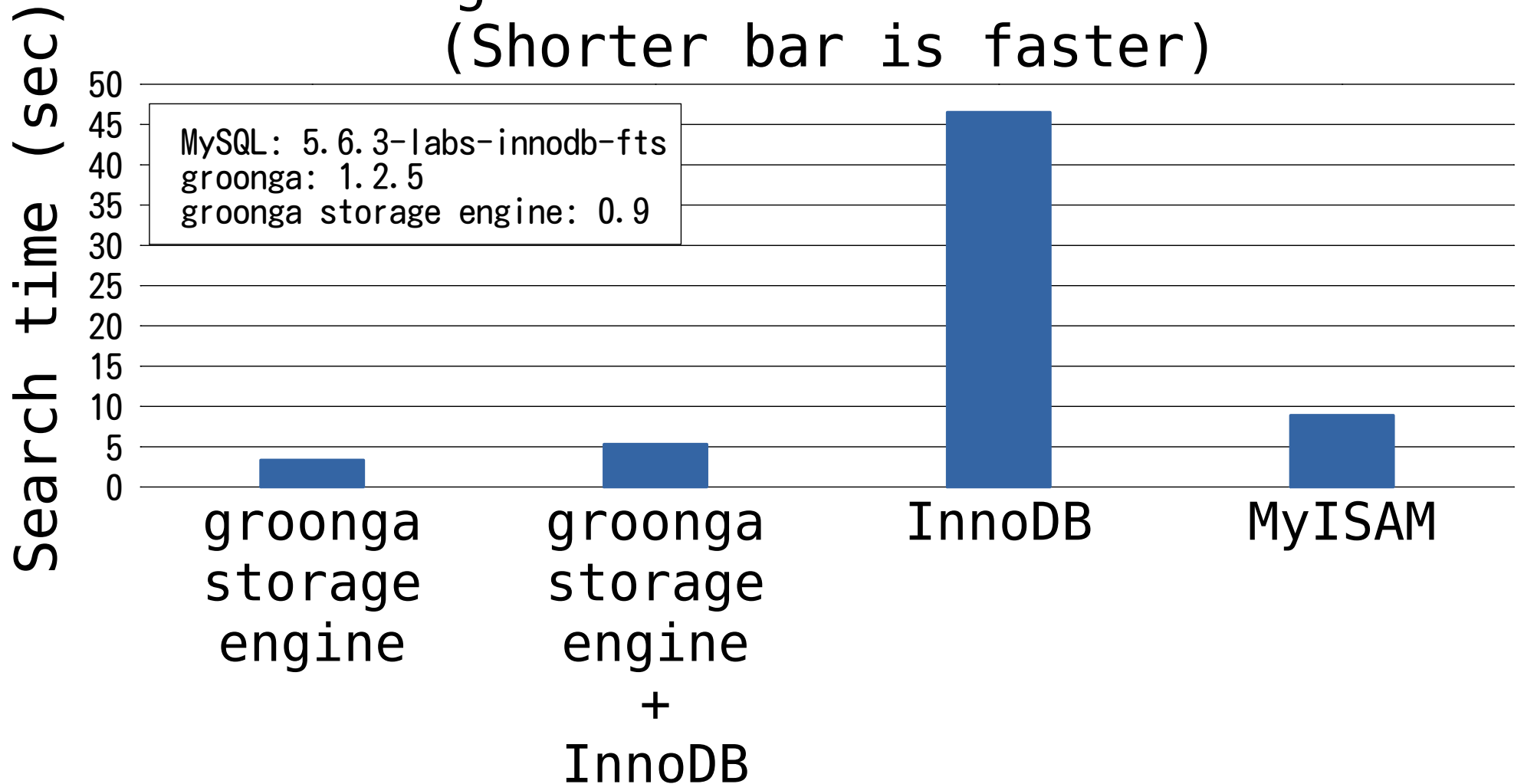




Fast fulltext search

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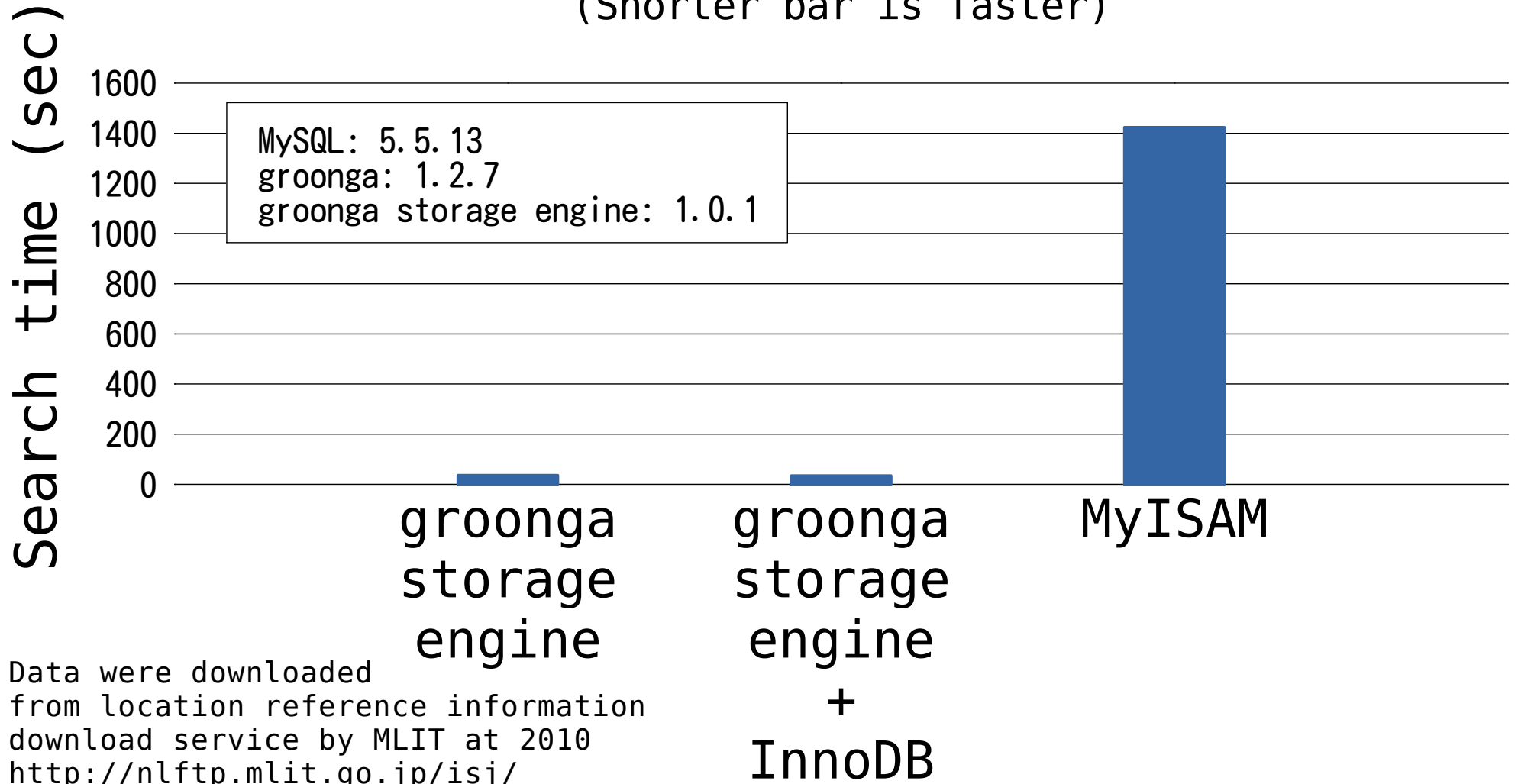




Fast geo search

- ★ A storage engine of MySQL
- ★ Fast fulltext search
- ★ Fast geo search
- ★ Real-time update

Elapsed time for 1,000 MBRContains + ORDER BY searches
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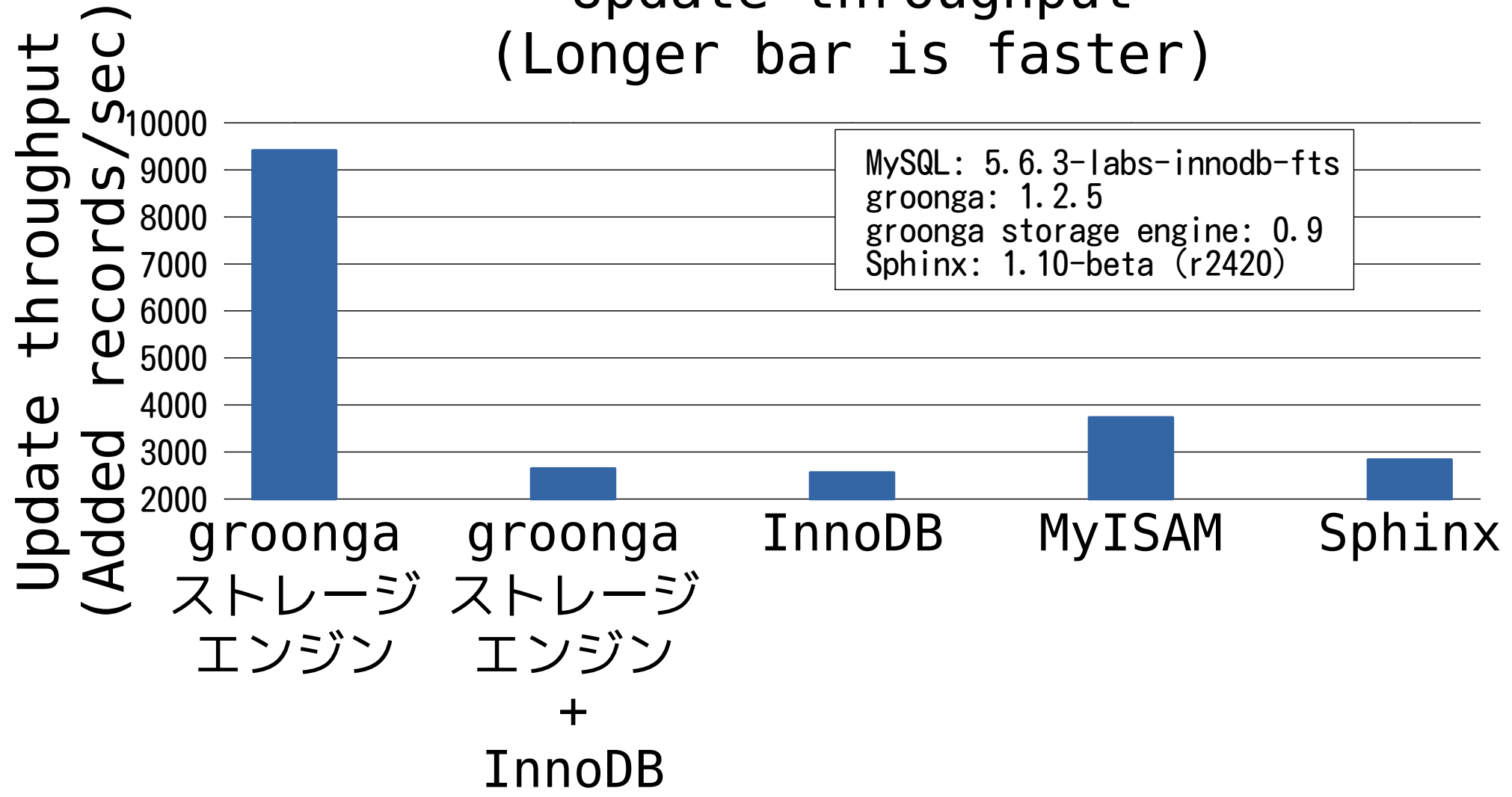




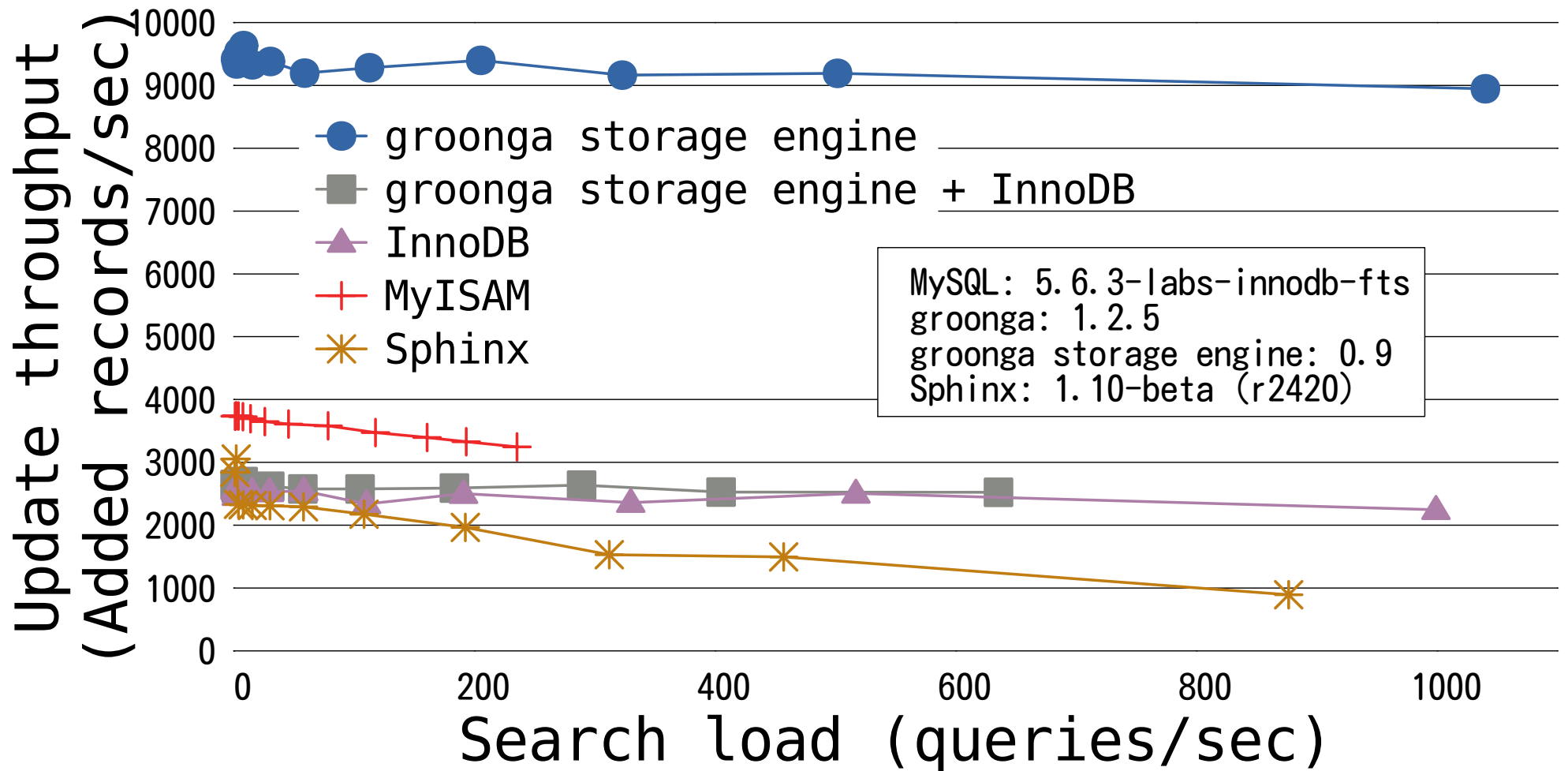
Real-time update

- ★ A storage engine of MySQL
- ★ Fast fulltext search
- ★ Fast geo search
- ★ ~~Real-time update~~
 - ★ ~~Fast update~~
 - ★ ~~Lock free~~

Update throughput (Longer bar is faster)



(Horizontal line means
fast update with searching)





Conclusion

A fast
fulltext search
for
all MySQL users!

<http://mroonga.github.com/>