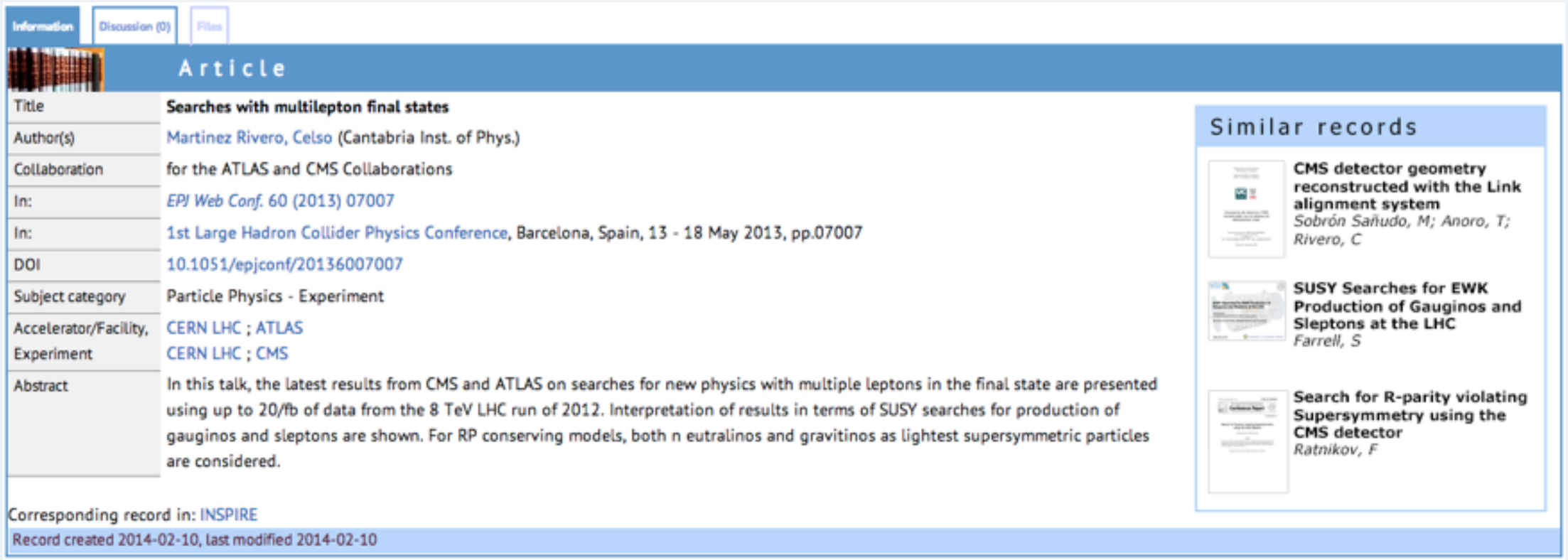
MLTDL - More Like This for Digital Libraries

CERN spin-off

TIND

What is More Like This?



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Why More Like This?

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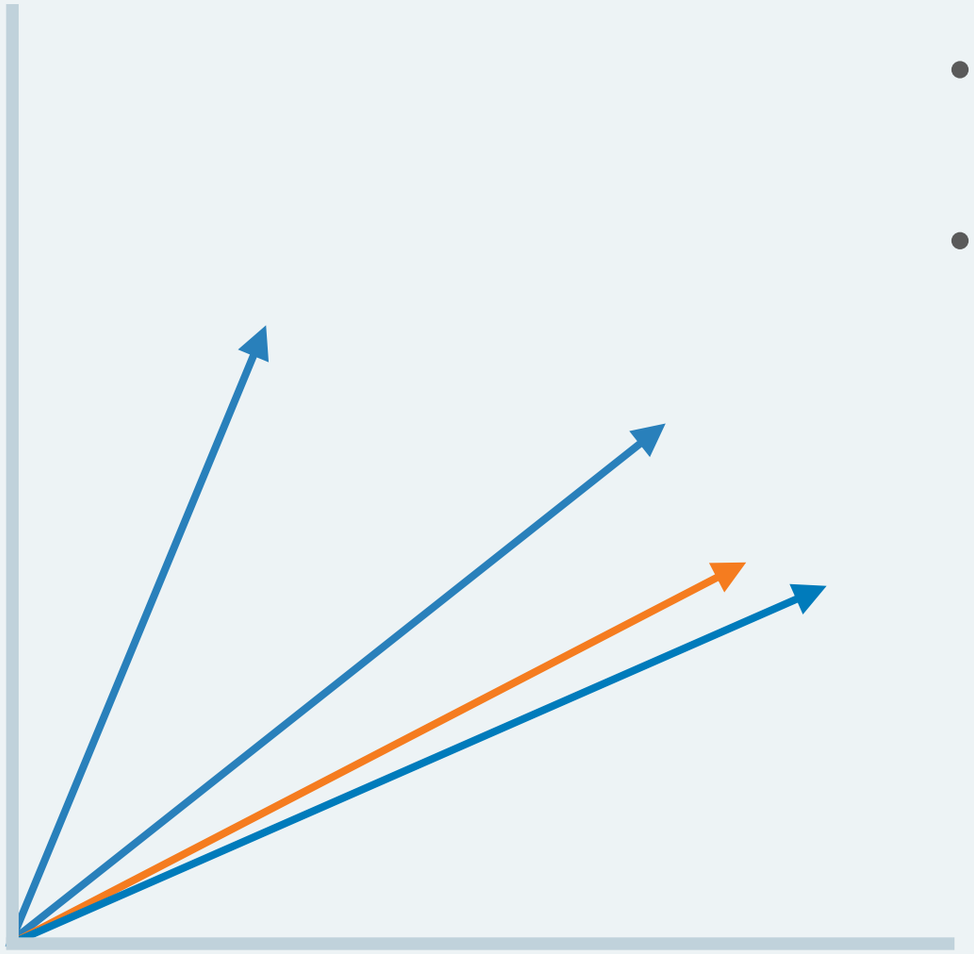
How does MLT work today?



- TF-IDF
- Term Frequency
- Inverse Document Frequency

- Supported by popular indexers
  - Solr
  - ElasticSearch

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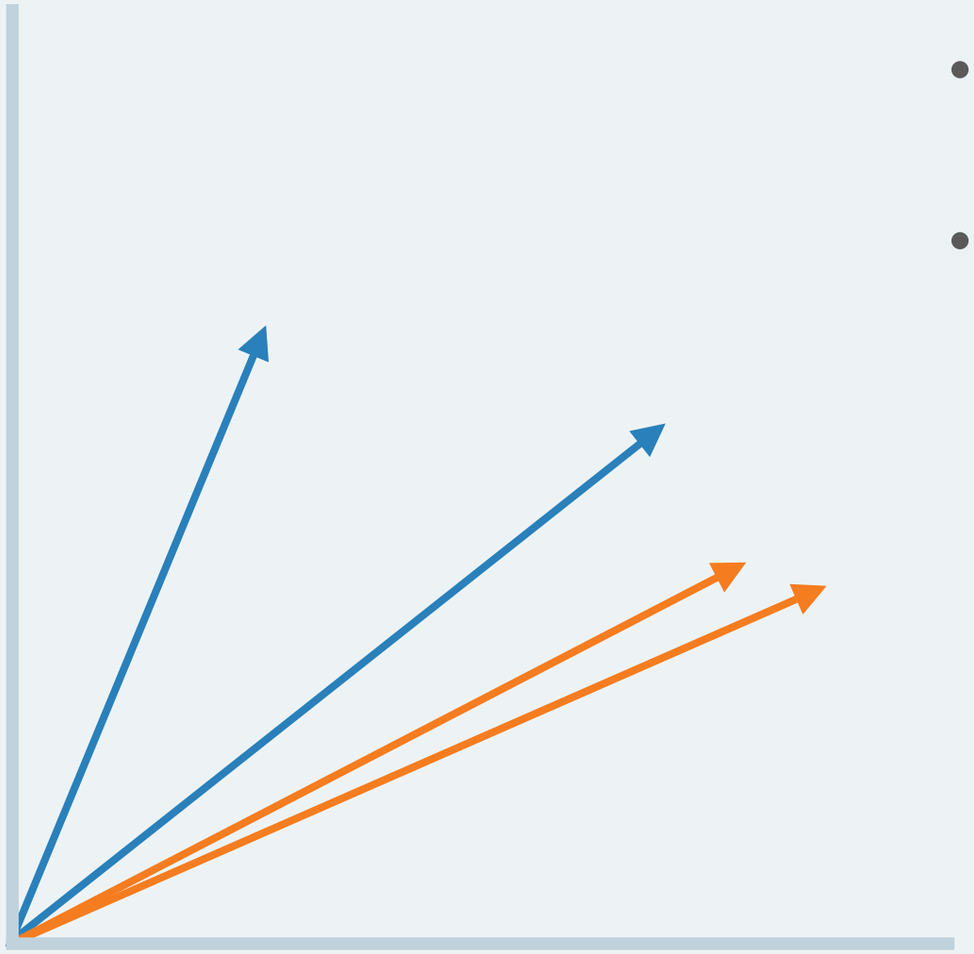
How does MLT work today?



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Can MLT do better?

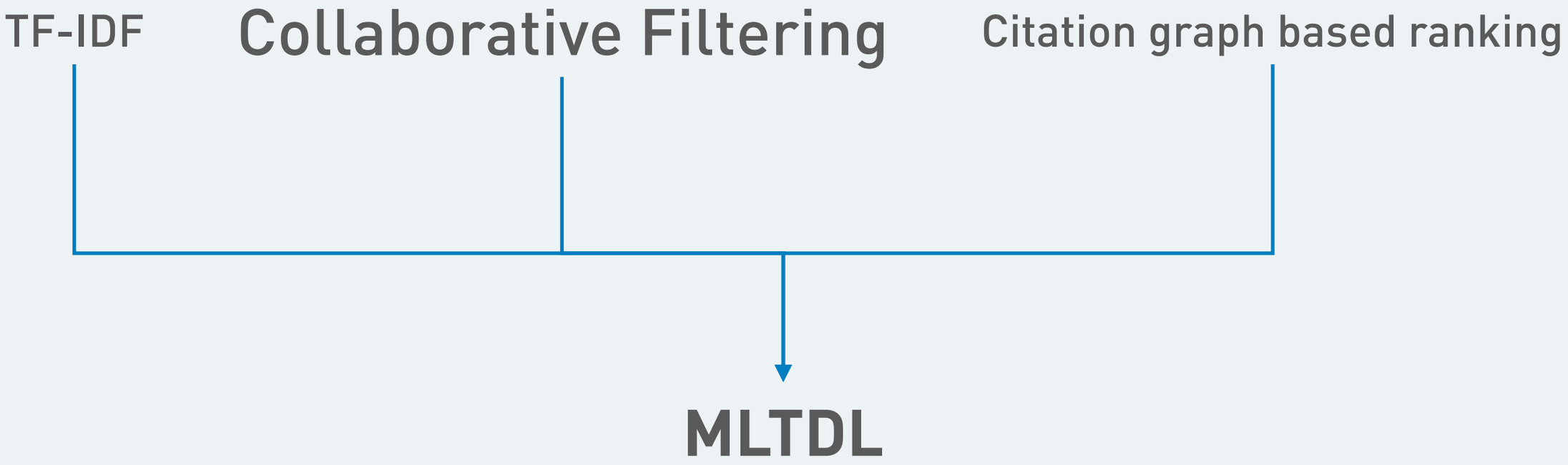
TF-IDF:

+ Efficient queries
+ Efficient indexing
+ Simple implementation

– Documents in the collection may be too similar
– No concept of user activity
– Uses only a small set of the information available

Introducing MLTDL

Utilizing the characteristic attributes of the digital library



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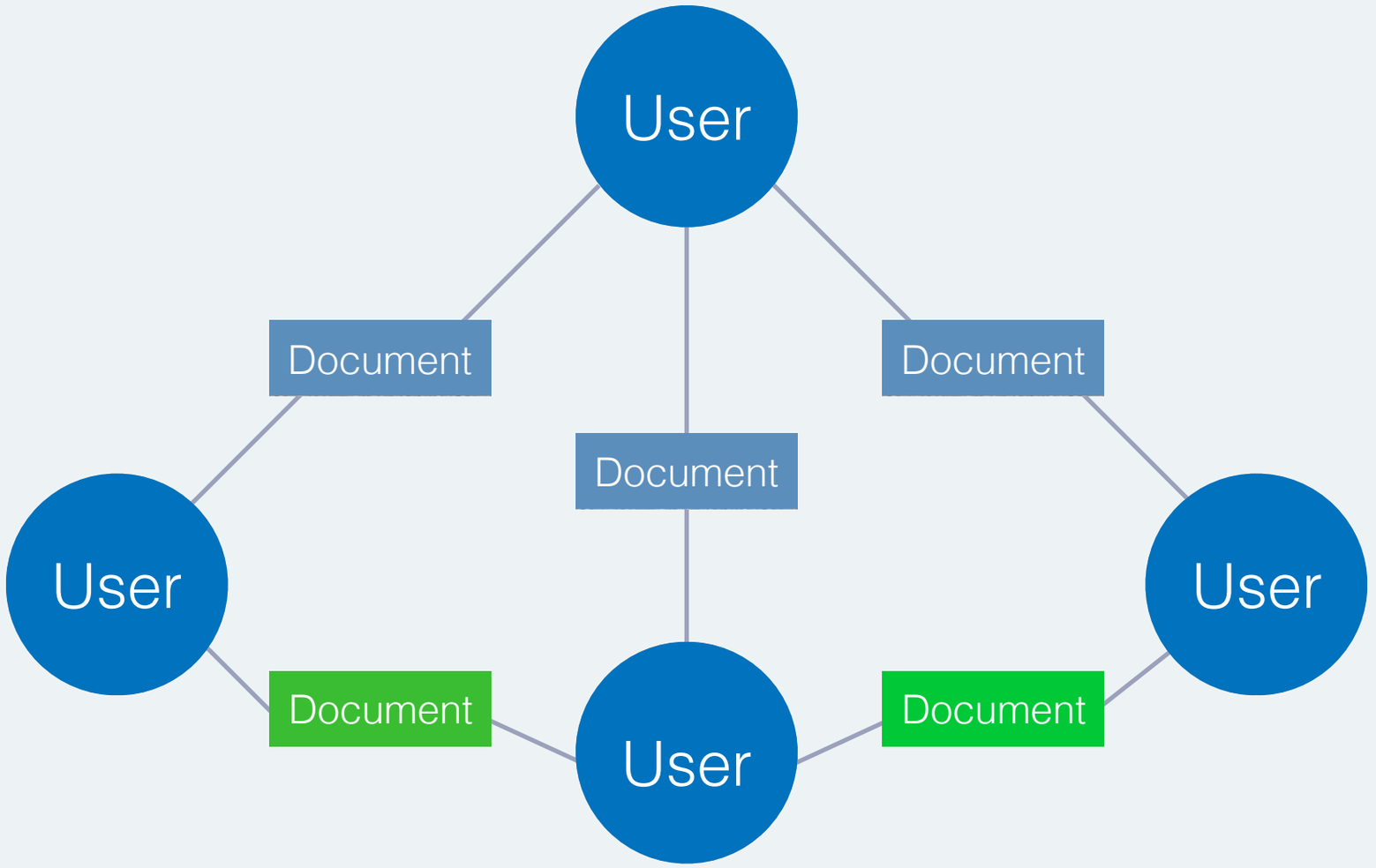
Graph based collaborative filtering



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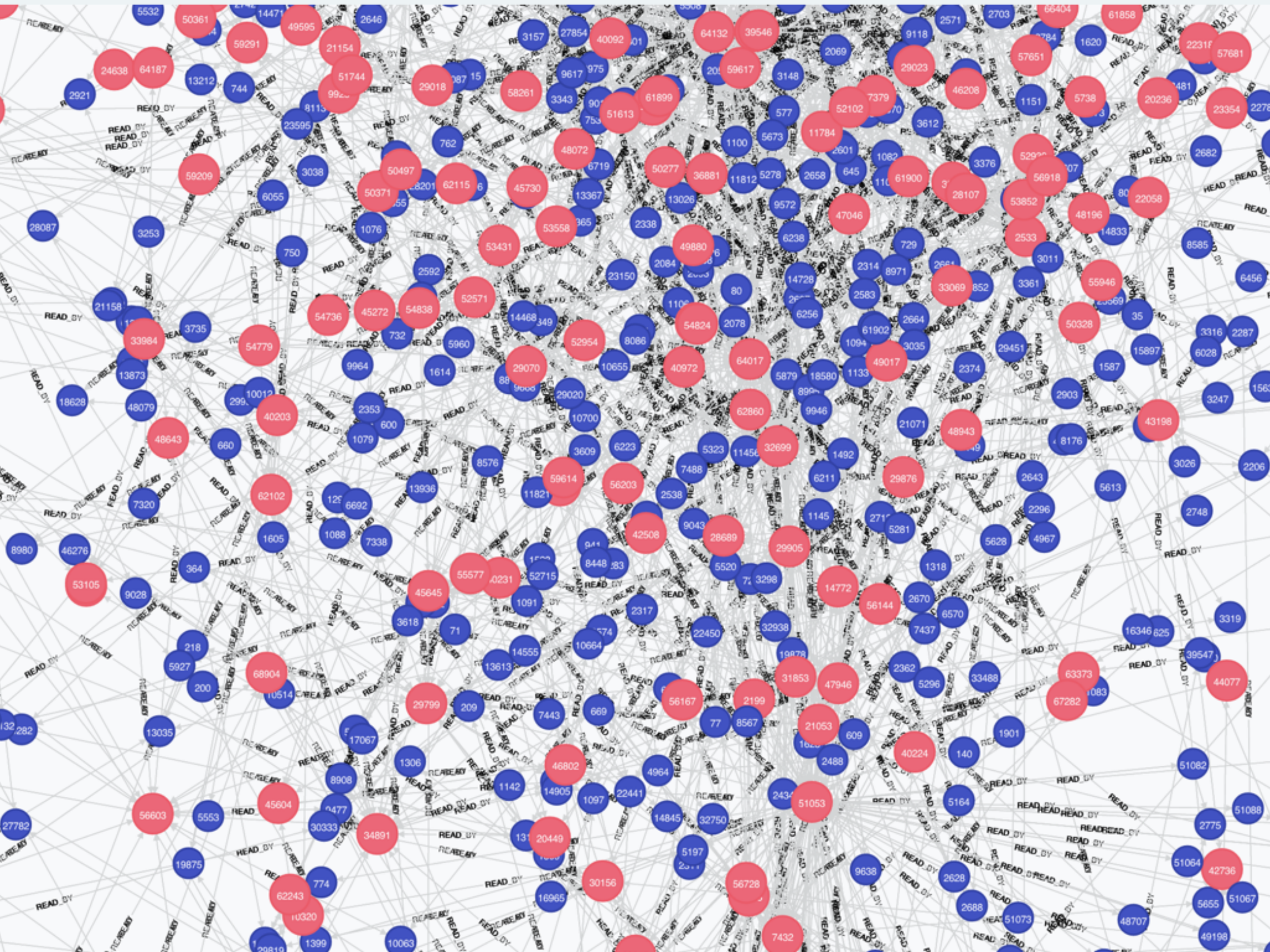
READ_BY
NEARREADY

Who are the users?

Bots

Overly curious

Librarians

Singleton

Developers

Real users

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Doin' the diggin'

Automatic log analysis and graphing

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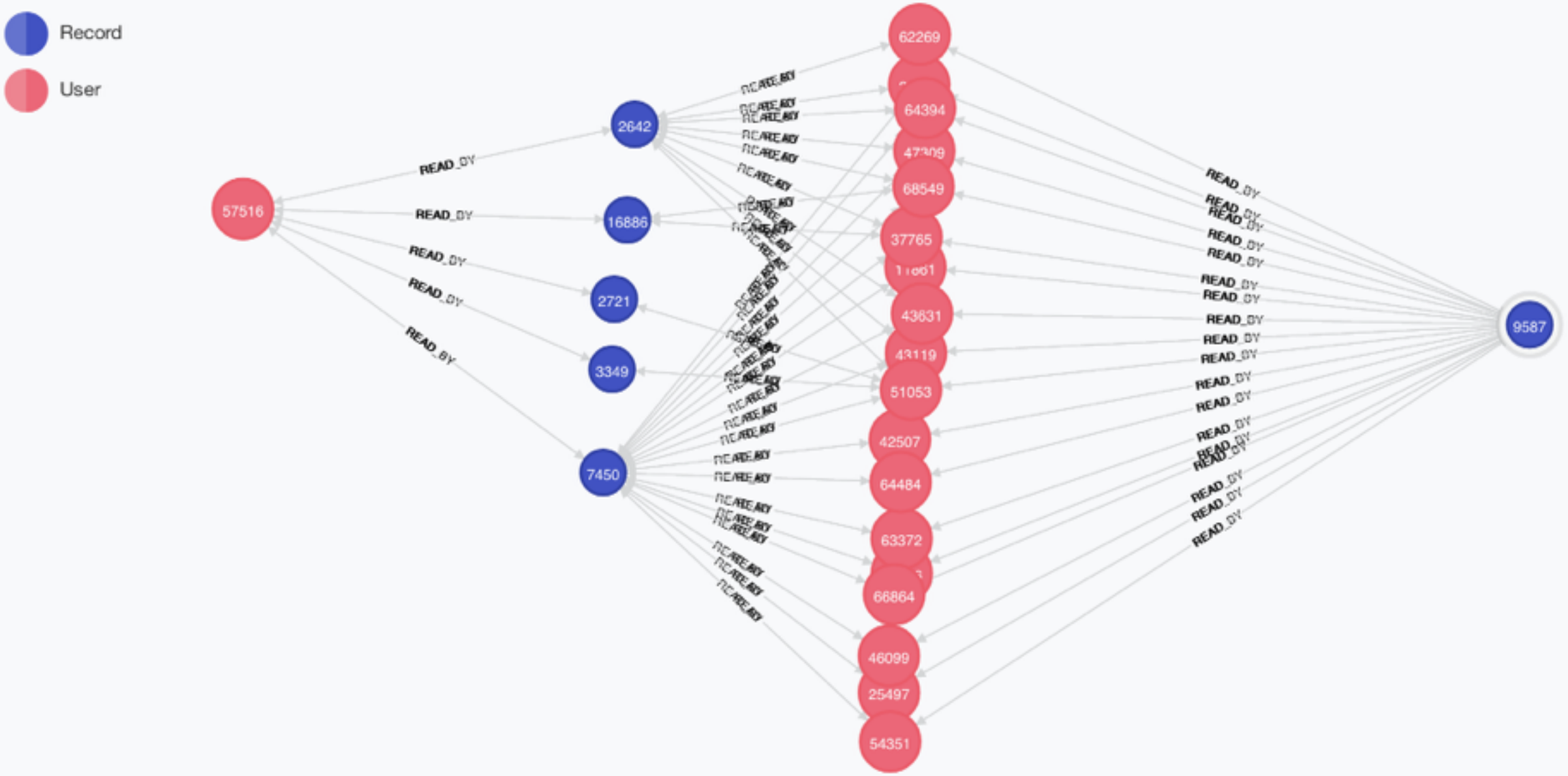
Record
User
57516
READ_BY
2642
16886
2721
3349
7450
62269
64394
68549
37765
43631
51053
42507
64484
63372
66864
46099
25497
54351
9587

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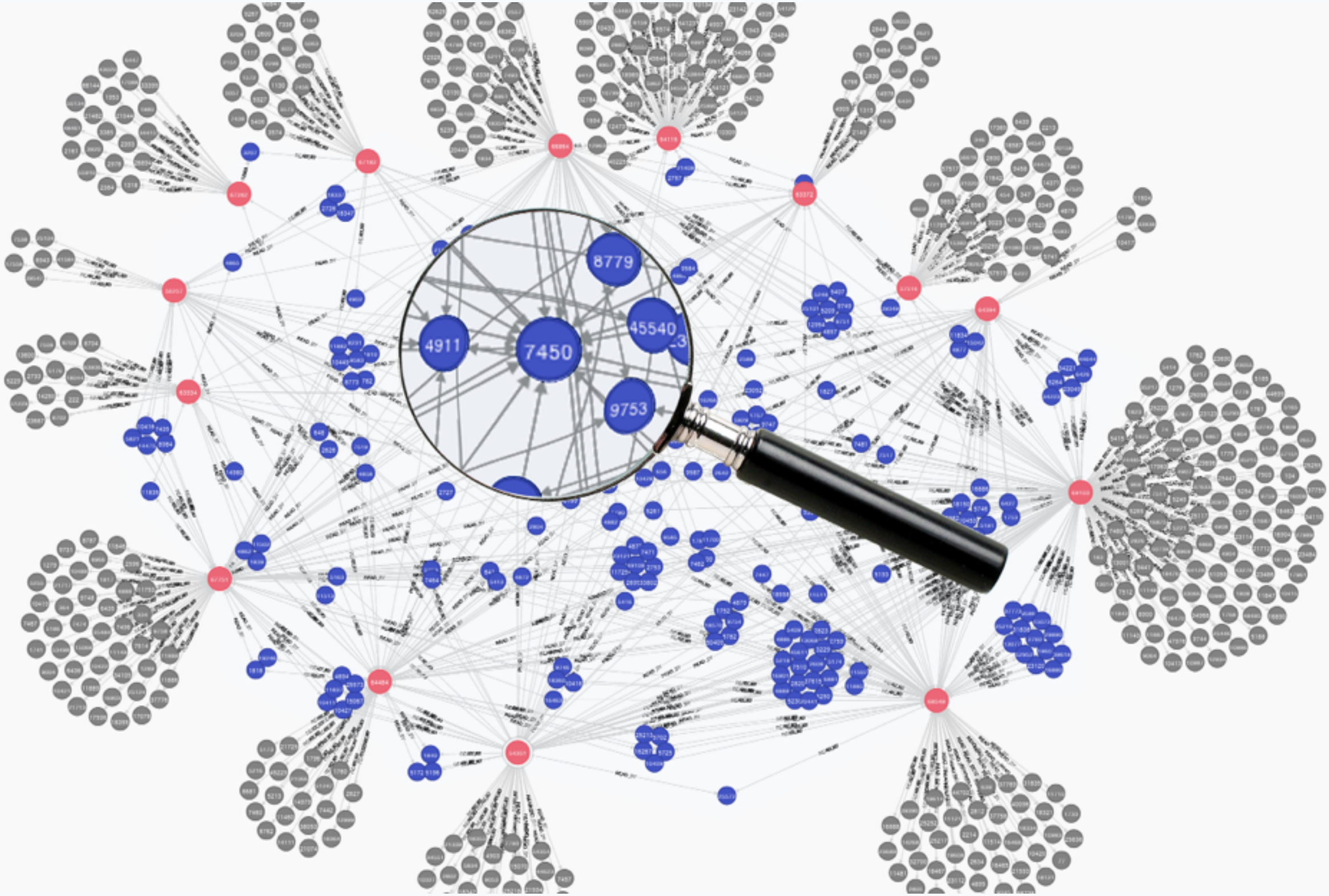
Record
User



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Looking at record 1344131

From one users perspective

	More Like This	Our recommendation
1	1391730	1328960
2	1235963	1391730
3	1367755	1367755
4	789847	1378511
5	1399527	
6	1319540	
7	1378511	
8	1328960	

Record 2, 4 and 6 are not present in graph
Record 5 is not relevant according to our graph

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Looking at record 1344131

From another users perspective

	More Like This	Our recommendation
1	1391730	1367755
2	1235963	1399527
3	1367755	1378511
4	789847	
5	1399527	
6	1319540	
7	1378511	
8	1328960	

Record 2, 4 and 6 are not present in graph
Record 1 has been read by the user

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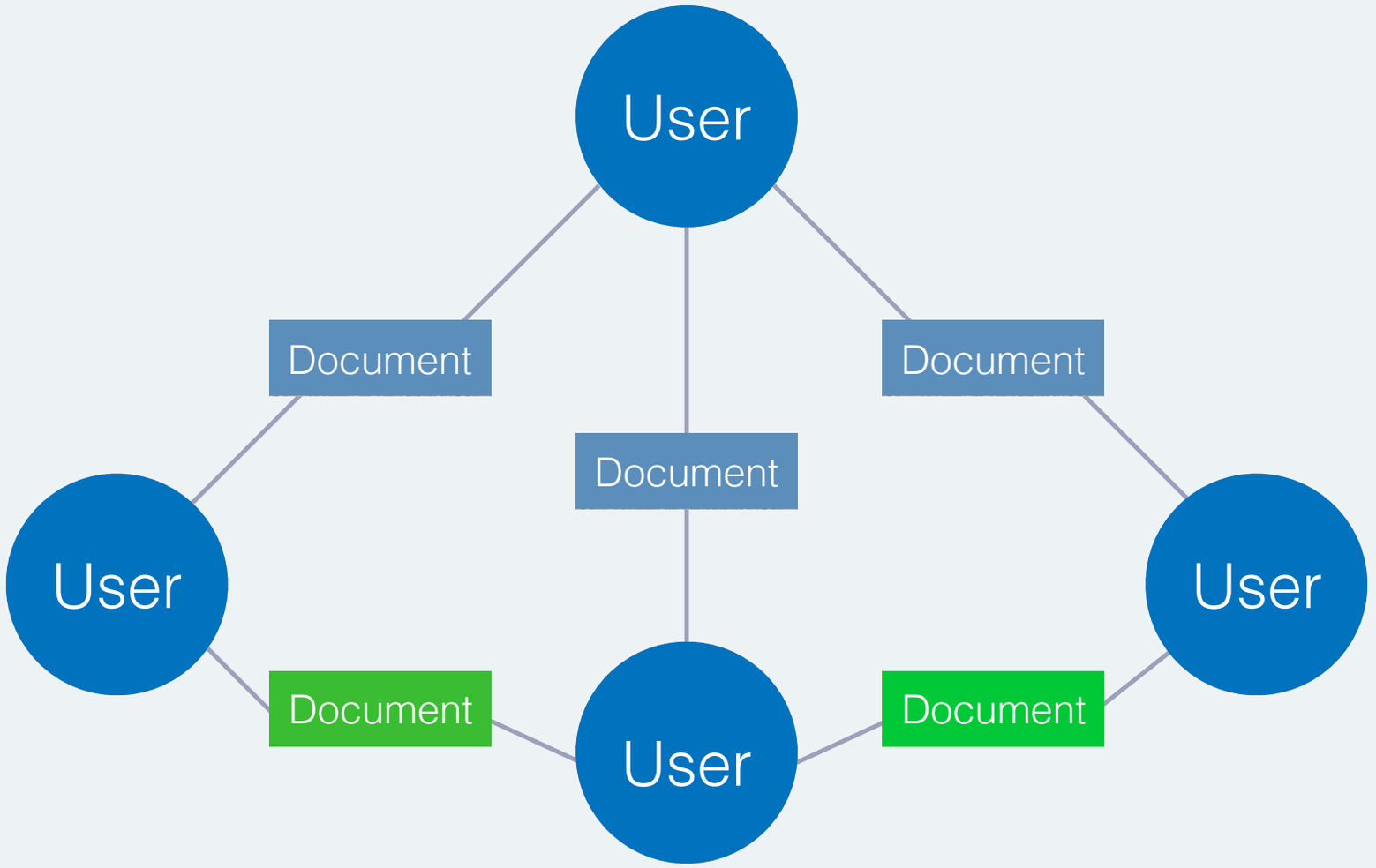
Questions?



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