

## BI / read / 17

query	BI / read / 17				
title	Information propagation analysis				
pattern	<pre>graph TD     person1[person1: Person] -- hasCreator --&gt; message1[message1: Message]     message1 -- hasTag --&gt; tag[tag: Tag]     message1 -- replyOf*0.. --&gt; post1[post1: Post]     forum1[forum1: Forum] -- containerOf --&gt; post1     forum1 -- hasMember --&gt; person2[person2: Person]     forum1 -- hasMember --&gt; person3[person3: Person]     person2 -- hasCreator --&gt; tag     person3 -- hasCreator --&gt; tag     tag -- hasTag --&gt; message2[message2: Message]     message2 -- replyOf --&gt; comment[comment: Comment]     comment -- count distinct --&gt; post2[post2: Post]     post2 -- containerOf --&gt; forum2[forum2: Forum]     forum2 -- «neg» hasMember --&gt; person1</pre>				
desc.	<p>This query aims to identify instances of “information propagation” when a Person (person1) submits a Message (message1) with a given Tag (tag) to a Forum (forum1). This is read by other members of forum1, Persons person2 and person3. Some time later (specified by the delta parameter), these persons have a discussion with the same tag in a different Forum (forum2) where person1 is not a member. The discussion consists of a Message (message2) by person2 and a direct reply Comment (comment) by person3.</p> <p>Return IDs of person1 with the number of interactions their Messages (might have) caused.</p>				
params	1	tag	Long String	Tags with a similar amount of Messages are selected	
	2	delta	32-bit Integer	Measured in hours, selected to be between 8 and 16 hours.	
result	1	person1.id	ID	R	
	2	messageCount	32-bit Integer	A	
sort	1	messageCount	↓		
	2	person1.id	↑		
limit	10				
CPs	2.1, 2.3, 8.1				