BI / read / 1

BI 1	query	BI / read / 1
BI 2	title	Posting summary
BI 3 BI 4 BI 5 BI 6	pattern	message: Message creationDate < \$date length
BI 7		year(creationDate)
BI 8		Given a date, find all Messages created before that date. Group them by a 3-level grouping:
BI 9 BI 10 BI 11 BI 12 BI 13 BI 14 BI 15	desc.	 by year of creation for each year, group into Message types: is Comment or not for each year-type group, split into four groups based on length of their content 0: 0 <= length < 40 (short) 1: 40 <= length < 80 (one liner) 2: 80 <= length < 160 (tweet) 3: 160 <= length (long)
BI 16		• 3: 160 <= length (long)
BI 17 BI 18 BI 19	params	1 date Date
BI 20 BI 21 BI 22 BI 23 BI 24 BI 25	result	1 year 32-bit Integer R year(message.creationDate) 2 isComment Boolean M true for Comments, false for Posts 3 lengthCategory String C Ø for short, 1 for one-liner, 2 for tweet, 3 for long 4 messageCount 32-bit Integer A Total number of Messages in that group 5 averageMessageLength 32-bit Integer A Average length of the Message content in that group 6 sumMessageLength 32-bit Integer A Sum of all Message content lengths 7 percentageOfMessages 32-bit Float A Percentage of all messages created before the given date
	sort	1 year 2 isComment ↑ false < true, i.e. the ordering puts Posts first, and Comments second 3 lengthCategory ↑ order based on the length of the category, Ø (short), 1 (one liner), etc.
	CPs	1.2, 3.2, 4.1, 8.5