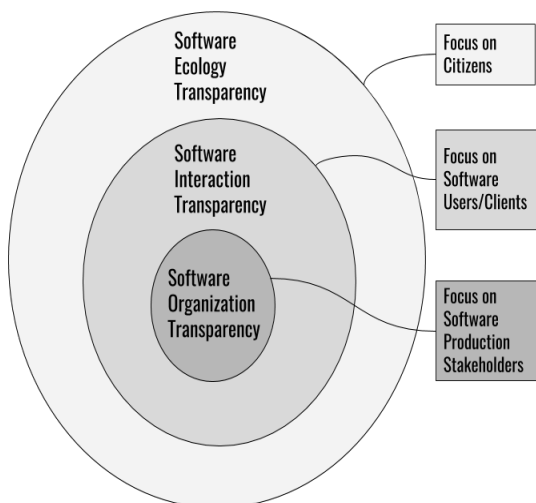


IS THERE A DEMAND OF SOFTWARE TRANSPARENCY?

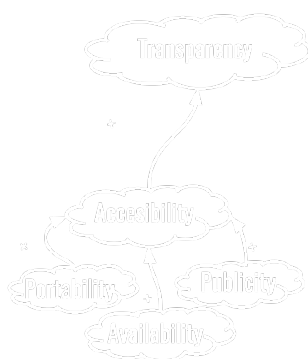
This briefing reports scientific evidence on the effectiveness of an approach to find if there is a demand of software transparency. The approach mines bills proposed to the Brazilian Congress in order to argue for the existence of a demand for software transparency.

FINDINGS

- Bills are related to software transparency in three different levels:



- Most of the bills are demanding **accessibility** of information, as the citizens are demanding mostly **accountability** from government. (Outer circle).
- There are bills such as the one demanding **disclosure** of information of each state government in its Transparency Web Portals; this is a requirement to receive financial support from the main government. (Middle circle).
- We found that qualities used to describe nonfunctional requirements are effective as a vocabulary for finding Bills related transparency.



- Qualities served as a starting point to create Keywords manually; however, as this task is subjective, we found necessary the automation by extracting keywords from the bills texts.
- Keywords can be singles words as well as compound words. For instance **prestação de contas**. We named this kind of keywords of phrase queries.
- Phrase queries showed to be more precise; thus, **acesso à informação** is more precise than **acesso** in some line of the bill and **informação** in other line.
- We took advantage of the qualities from the transparency catalog, which is organized in a three-tier network. We used the levels as to rank the vocabulary matching.

	Transparency	accessibility	portability	availability	publicity	Bill weight
Bill 1	5	2	0	1	1	9
Bill 2	5	2	0	1	1	9
Bill 3	5	2	0	1	0	8

- From 5011 Bills took from the Votenaweb.com.br repository, we found 44 Bills with high demand of transparency. This approach can be useful to find this type of demand in other sources of information.

Keywords:

Transparency
Legal Aspects
Nonfunctional Requirements
Text mining

Who is this briefing for?

Public, as to provide of an awareness about Software Transparency. Software researchers/practitioners as to be informed of possible future requirements, that is: transparency

Where the findings come from?

All findings of this briefing were extracted from the research conducted by Portugal et al.

What is included in this briefing?

The main findings of the research.

What is not included in this briefing?

Detailed description of the techniques used for our findings.

To access other evidence briefings on software engineering:

The original texts and the process performed in this research
<https://git.io/vdBbc>

For additional information about our Research Group, and the annual workshop on Systems Transparency:

<http://transparencia.inf.puc-rio.br>
<http://wtrans.inf.puc-rio.br/>