

MarcoCivil: Visualizing the Civil Rights Framework for the Internet in Brazil

Lorena Lucas Regattieri
LABIC-UFES
regattie@ualberta.ca

Fabio Malini
LABIC-UFES
fabiomalini@gmail.com

Fabio Goveia
LABIC-UFES
fabiogv@gmail.com

Gabriel Herkenhoff
Labic-UFES
gabriel.herkenhoff@gmail.com

ABSTRACT

In this paper, we map the controversy surrounding the Marco Civil da Internet (Civil Framework for the Internet) in Brazil. Drawing on a Twitter dataset spanning from August 2012 to December 2013, this study uses a series of methods of data mining, processing, and information visualization to produce a historiography of collective actions related to the Marco Civil. The MarcoCivil platform at the “Digital Culture” website created initiatives to spread the discussions online: a Twitter profile @MarcoCivil (run by the administrators of the platform) and the MarcoCivil hashtag. To conduct the Marco Civil cartography we chose to work with the messages indexed to the MarcoCivil hashtag circulating on Twitter. In 2012 and 2013 Twitter became the online space in which cyber activists were most vocal. From October 2012 to January 2013, we collected about 21.997 tweets related to Marco Civil, it was then that we noticed the presence of a controversy and a diversity of points of view in dispute. News reports in Brazilian newspapers during the discussion, little took into consideration the issues engendered in the struggle for approval of the law. By demonstrating with graphs the dispute between the different actors involved in this battle, we seek to contribute to the history of the approval of the Marco Civil. From telecommunications companies to politicians, our report shows how history was made in the field of the internet human rights.

Categories and Subject Descriptors

D.3.3 [Programming Languages]: Language Constructs and Features – *abstract data types, polymorphism, control structures.*

K.4.1 [Computer and Society]: Public Policy Issues – *Ethics, Intellectual property rights, privacy, regulation.*

G.2.2 [Numerical Analysis]: Graph Theory - *Graph algorithms. Network problems.*

General Terms

Algorithms, Management, Measurement, Documentation, Performance, Design, Reliability, Experimentation, Human Factors, Languages, Theory, Legal Aspects, Verification.

Keywords

Civil Rights Framework for the Internet, journalism, data mining, social network analysis, complex networks.

1. INTRODUCTION

After an intense debate in 2007-08, the Office of Legislative Affairs of the Ministry of Justice, in partnership with the School of Law in Rio de Janeiro at the Getulio Vargas Foundation (FGV), initiated the collaborative construction of the proposal for a civil law framework for the Internet in October of 2009. The goal was to create legislation that defined “the legal responsibility for providers and users for the content posted on the Internet...[and identified] measures to preserve and regulate the fundamental rights of Internet users, such as freedom of expression and privacy”.¹

The Civil Rights Framework for the Internet in Brazil opposes the tendency to establish restrictions, convictions or bans on the use of the internet. The framework intended to determine clearly the rights and responsibilities regarding the use of digital media. The focus, therefore, is the establishment of a legislation ensuring rights, not a rule restricting freedoms. Between November 2009 and June 2010, the Marco Civil was developed through a uniquely open public process that allowed all Brazilian Internet users an opportunity to comment on its text. In the spirit of the bill’s substance, civil society was empowered to collaborate with policymakers in order to make the bill reflective of public interest and priorities.

An initial draft drawn by legislators was posted Cultural Digital, an open platform where the public could submit and review suggested changes to the bill. Throughout an open debate, Marco Civil received over two thousand comments from academics, civil society organizations, technical experts, and private individuals. In 2011, the Marco Civil was submitted to Congress as Executive Bill 2126 and was given priority on the legislative agenda. Since then, the bill has become the subject of numerous controversies in the House of Representatives due to inflammatory issues such as network neutrality, privacy, freedom of expression, and copyright. The Bill has made it onto the agenda of the House of

¹ An English version of the bill is available at FGV <http://diretorio.fgv.br/sites/diretorio.fgv.br/files/Marco%20Civil%20-%20English%20Version%20sept2011.pdf>

Representatives eight times, but each time the vote has been postponed due to the lack of agreement among Members about crucial points in the Marco Civil.

Challenges in reaching an agreement have created an obstacle to the consolidation of a national-level regulatory framework for the Internet. Among other things, this immobility reveals a tension between the interests of businesses and the demands of civil society. Over the course of the bill's legislative history, the telecommunications lobby and content industries have been the driving force behind significant changes to the text. During this period, we have also witnessed a somewhat "schizophrenic" dynamic take hold of policymaking efforts concerning the Internet. While the Ministry of Justice created an innovative collaborative platform so that civil society could participate in the production of "The Bill of Rights for the Internet," it also saw broad mobilization around a bill that sought to combat all forms of crime on the Internet, especially financial crimes. Meanwhile, the Parliament endeavored to focus on criminal laws as a foundational aspect of Internet regulation in the country.

This strange situation persists today, as the copyright and telecommunications industries oppose free "peer to peer" exchange and net neutrality. This can be explained, in part, by the interests of public security forces, which after public protests in June 2013 (strongly articulated by the civil society through social networks) advocated establishing a longer required period for the retention of private communications data that could support the investigation of crimes and "deviations". The situation was compounded in the wake of the Edward Snowden leaks revealing the National Security Agency (NSA) spying other countries through PRISM. This struck a chord for Brazilian President Dilma Rousseff, who subsequent to the leaks, proposed an amendment to the Marco Civil that would force foreign companies to host data on national servers. The proposal has proved highly controversial, due both, to the geopolitical implications it would carry and the technical complications it could introduce.

Within the approval of the Marco Civil, the world turns the eyes to Brazil when it comes to Internet civil rights. The world celebrated the bill at the NETmundial – Global Multistakeholder Meeting on the Future of Internet Governance and at Arena Participative. At the Arena, we had the presence of important people discussing internet and human rights, such as Roy Singham (ThoughtWorks), Julian Assange (Wikileaks) from the Ecuador Embassy, and Frank La Rue (ONU). The event that brought together representatives of governments and civil society in search of a letter of international principles for the Internet was considered the beginning of the process to discuss the internet policies in a global context. History was made, but it is crucial to understand the path to the approval of the Marco Civil in order to comprehend the struggles involved in the fight for Internet human rights.

2. METHOD AND GOALS

Latour[1] and Venturini's[2] mapping controversies technique is successful method to trace digital data. It is broadly used in the communications field to map the debates around a specific object/event. This is the theoretical foundation guiding our research; we used the cartography method to support us in the digging experience in the Twitter data. As an empirical template, Twitter served us for the purpose of:

- Map the network of controversies on the #MarcoCivil;
- Perform a semantic analysis of the expressions, hashtags, and controversial issues that circulated on Twitter under the #MarcoCivil hashtag.

We centered our analyses around two distinct periods:

- July - December 2012: The Marco Civil bill enters the agenda of the House of Representatives
- July - December 2013: Discussions about the bill resume at the House of Representatives.

In our network visualization, we chose to plot the network of retweets (RTs) that included the #MarcoCivil hashtag. Since RTs must be replicated by many individuals, RTs on Twitter indicate that a subject (represented by a hashtag) carried significant social relevance. We extracted data directly from the Twitter API, which allowed us to capture and store about 20,000 tweets produced by almost 10,000 profiles monitored in 2012.

For each tweet, we were able to log the tweet text, date, origin and destination of the tweet. The subsequent step after mining and processing is the data is the visualization of data. Using the open source tool Gephi², we sliced the data using different metrics, creating new graph visualizations for each metric. To support our semantic analysis of the data, we analyzed 5137 tweets to identify the political position of each actor in the debate on #MarcoCivil; the way Twitter profiles were expressing themselves in the network; the intention of the message; the themes it touched upon; and the controversy.

The second procedure was to analyze all the tweets, 21,000 in 2012 and 110,000 in 2013. For this, we used a data-mining tool called NAR_T³, a python script developed within the Laboratory of Studies on Image and Cyberculture (LABIC). The script provides the following outputs:

- Most repeated words and hashtags.
- Most replicated tweets.
- Word clouds and hashtags.
- Co-occurring hashtags network.
- Most mentioned users.
- Number of tweets per user.
- Number of active users per day

After generating groups with Gephi, we extracted the profile names that built up each cluster in the network. When we processed the script with the "cluster_usernames" of each of the groups, we obtained the same outputs, but now we could analyze them by targeted group. This allowed us to investigate the unique positions surrounding the controversy of each of the groups identified.

² Gephi is an open-source software for visualizing and analyzing large networks graphs. Available at: <http://gephi.org>

³ This script was created to parse tweets. It is available at <https://github.com/ufeslabic/parse-tweets>

3. DISCUSSIONS

3.1 General Observations of Marco Civil

Network Dynamics

In August 2012, when the Marco Civil entered the voting agenda at the House of Representatives, the politics of this power struggle overflowed into the virtual universe, particularly on social networks. This chart represents the high level of participation on Twitter, especially, the days in which the bill was expected to be voted at the House of Representatives.

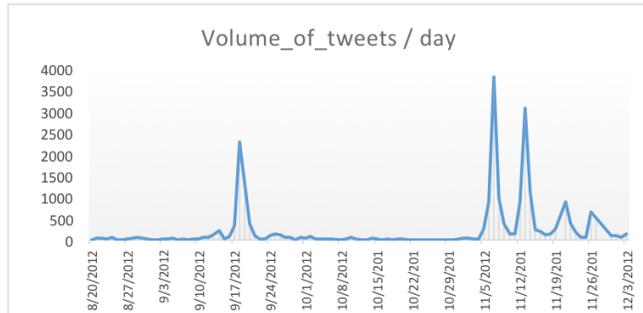


Figure 1. Number of Tweets per day with the hashtag #MarcoCivil on Twitter, from 21 August to 3 December 2012.

With the vote imminent, activists, parliamentarians, lawyers, specialists, businessmen, intellectuals, artists, government ministers and even President Dilma Rousseff used social networks to produce a broad debate on the subject. The buzz over the Marco Civil quickly became one of the longest standing controversies in the recent history of Brazilian politics. The increasing rate of publication of tweets directly correlates with increased political debate around the subject. The closer the House of Representatives was to voting on the legislation, the more activity we saw on Twitter under the #MarcoCivil hashtag. The representatives found themselves facing pressure from a broad range of channels: social networks, emails, blogs, and online media. Some party websites even underwent DDoS attacks. Digital expression around the issue became a strategy for activists. In many ways, these tactics exposed many politicians to public judgment, affecting their image among voters. This strategy has proven to be a key measure to the movements connected to the field of free culture and the most progressive deputies.

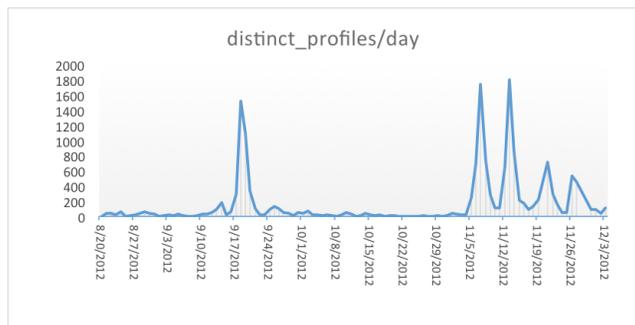


Figure 2. Number of unique users per day participating in the publication of tweets with the hashtag #MarcoCivil.

From August to December 2012, heightened publicity around the bill generated the mobilization of 16,072 different profiles, 22651 tweets and 5640 retweets (Figure 2). A variety of profiles and the

volume of tweets eventually formed an interactive network with different common points of view on distinct aspects of the law (Figure 2).

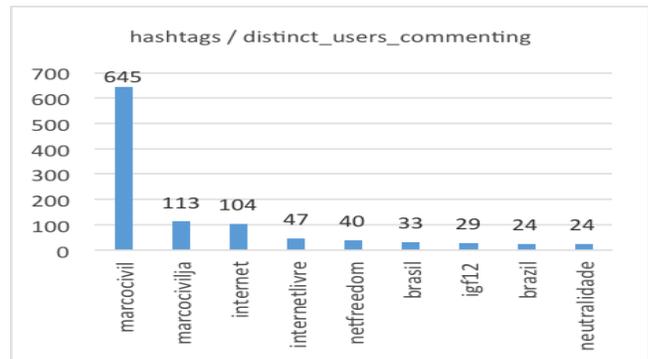


Figure 3. High rate Hashtag use with the hashtag #MarcoCivil.

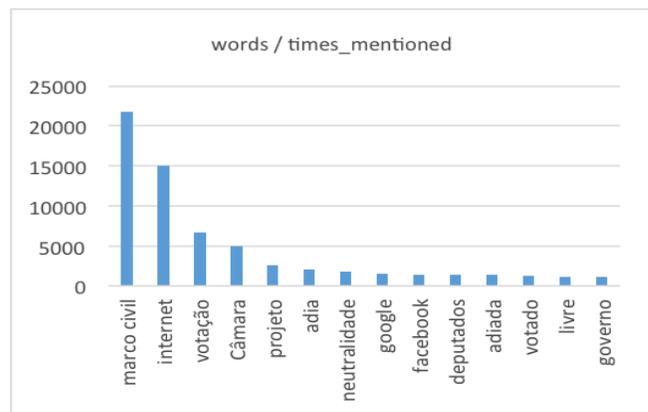


Figure 4. Word frequency within tweets mentioning the hashtag #MarcoCivil

Frequent use of the terms "vote" (votação) (6652), "postpones" (adia) (2065), "House"(câmara) (4941) and "bill of law" (projeto de lei) (2616)" suggested high levels of expectation that the bill would pass and a commitment, at least among a minority of users, to monitoring the long and tiresome journey of Marco Civil in the Congress. The anxiety around the bill was highlighted by the intense correlation of the hashtag #marcocivil with the #MarcoCivilJá (#MarcoCivilNow). The word "neutrality" and the #neutrality hashtag can be seen often in the dataset (Figure 3 and 4) suggesting it was the most commonly discussed subject in interactions between members of Congress and users tweeting about #MarcoCivil.

3.2 Marco Civil in 2013: the network is polarized and the privacy debate gains attention

In 2012, the difficult process in voting the bill 2126/2011, plus the numerous delays and changes in the course of the project, turned the social networks - notably Twitter - into a major platform for discussion about the Marco Civil. Activists, experts and concerned individuals began to debate the issue, seeking to defend their perspectives and understand the significance of the bill for the future of the Internet in the country. But with the failure to reach an agreement and the start of the municipal elections of 2012, the vote on the Marco Civil fell into oblivion,

eventually being suspended. In June of 2013, two critical events affected the trajectory of the bill: Public uprisings throughout the country and the first of the Snowden leaks. Protests over transit fare hikes, economic inequality and other “bread and butter” issues peaked in June, with some protesters referencing the bill and making it part of their messaging, both on and offline. At the same time, some activists began to argue against the creation of the civil framework for the Internet, claiming that the Marco Civil was a ploy made by the government to restrict Internet freedom. This questioning came up in light of the numerous arrests of Facebook page administrators from groups opposed to the government, in particular, Anonymous and Black Blocs [3]. Back then, videos from Anonymous began circulating claiming that Marco Civil was going to have the opposite effects: for them the intentions of Marco Civil were to control online content. Thus, a trend of polarization emerged while some continued to promote the bill, despite changes in the text that weakened user protections in the face of copyright restrictions, others began voicing opposition to the bill, arguing that it would lead to greater Internet censorship. The perspective of media outlets came out exactly between these two groups, as news feeds reflected the arguments of both sides. The emergence of groups that made radical critiques of the Marco Civil represented a fundamental shift in the debate on the subject. This change can be better understood when we undertake a semantic analysis of the network formed by these groups during this period of time.

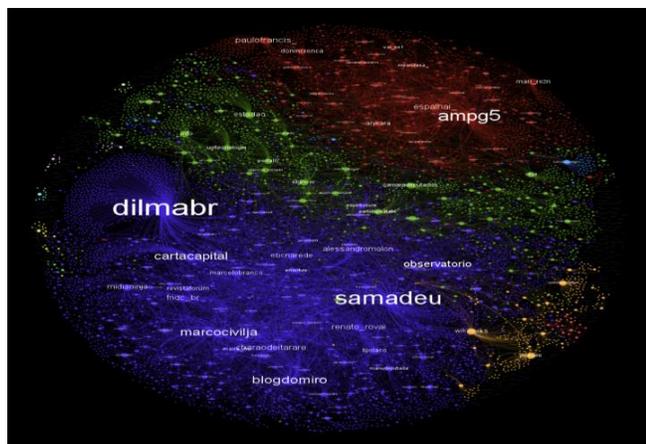


Figure 5. Network of profiles that participated in the debate on the Marco Civil from July to December 2013. In the Spotlight, profiles whose messages were most popular in the network.

The graph in Figure (5) shows the relationship established through retweets from profiles that between July 17 and December 31 that used the keyword "Marco Civil". To produce this visualization we processed the data with the high gravity scale to bring closer together those actors who had more connections with the group to which they belong. After this first step, we generated a statistic of modularity in order to visually emphasize each perspective by assigning each a different color. We used the metric of authority to give prominence to nodes that had both stronger and larger quantities of connections in the network, with the goal of finding those individuals who had a higher indegree in the Marco Civil controversy. All told, the final goal was to display those who received the highest number of RTs of other important actors in the network. For these groups, sharing messages creates

links between the actors in the network and illustrates a force of attraction between them (a dynamic referred to as “gravity”). As an individual, typically (though not always) shares ideas with those, which he agrees, individuals with similar opinions share content with and from each other, creating groups, which we call perspectives. There are four perspectives within the Marco Civil network:

- The purple network: individuals in favor of voting on the law (46.55% of the total network)
- The red network: individuals contrary to voting the bill (17.39%)
- The green network: media outlets and profiles specialized in law and civil rights (20.56%)
- The yellow network: foreign organizations that generally supported the proposal for a regulatory framework (4.1% of total)

4. CONCLUSIONS

Our study suggests that the free digital culture activists are the ones responsible for articulating the Marco Civil debates. Thus, social networks i.e. Twitter, prove to be a rich environment for the open debate. This network has become a major strategy to pressure the Brazilian Congress. In our study, we employed computer-assisted analysis through mining methods and data visualization in order to investigate our hypothesis. The outputs have proven that our hypothesis is correct, as our research displays several indications pointing to the centrality of the actions and pro-Marco Civil campaign coordinated by activists from Brazil and around the world. The days before voting on the Marco Civil by the House of Representatives were periods when Twitter profiles became highly mobilized in order to debate and press the Parliament on the approval (or not) of the Marco Civil. This demonstrates that the community formed around the hashtags remained attentive to the decision-making movement of Congress. On the other hand, it demonstrates how politics is creating a routine towards the emotional tone of networks, influenced by the chaotic flow of public opinion on the Internet.

5. ACKNOWLEDGMENTS

Funding for the project ‘Mapping Controversies on the Internet: a scientific cooperation between researchers who analyze the relationship between Aesthetics, Power and Internet’ generously supplied by National Council for Scientific and Technological Development (CNPq), National Academic Cooperation Program (Procad), Coordination of Improvement of Higher Education Personnel (Capes), Foundation of the Ministry of Education (MEC). Our thanks to the team at the Laboratory of Studies in Image and Cyberculture (LABIC) for the continues support.

6. REFERENCES

- [1] Latour, B. 2005. *Reassembling the Social: an Introduction to Actor Network Theory*. Oxford University Press. Oxford.
- [2] Venturini, T. 2010. Diving in magma: how to explore controversies with actor-network theory. In *Public Understanding of Science* 19 (2009): 1-16.
- [3] Passos, N. 2014. *O Black Bloc e o papel das mídias sociais nas manifestações brasileiras de 7 de setembro de 2013*. Unpublished.