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Rob Heyman, Jo Pierson. An Explorative Mapping of the Belgian Social Media Marketing Value Network and Its Usage of Personal Identifiable Information. Marit Hansen; Jaap-Henk Hoepman; Ronald Leenes; Diane Whitehouse. Privacy and Identity Management for Emerging Services and Technologies: 8th IFIP WG 9.2, 9.5, 9.6/11.7, 11.4, 11.6 International Summer School, Nijmegen, The Netherlands, June 17-21, 2013, Revised Selected Papers, AICT-421, Springer, pp.203-213, 2014, IFIP Advances in Information and Communication Technology (TUTORIAL), 978-3-642-55136-9. 10.1007/978-3-642-55137-6_16 . hal-01276074

HAL Id: hal-01276074

<https://hal.science/hal-01276074v1>

Submitted on 18 Feb 2016

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An Explorative Mapping of the Belgian Social Media Marketing Value Network and its Usage of Personal Identifiable Information

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Abstract. Research has shown an increase in both disclosure of personal data and means to gather this data on social media such as Facebook. Little research has been done to analyze what happens with this data and how it circulates between different actors. The aim of this research is to map a subset of the Belgian social media marketing companies as a value network and how these actors use social media users' data for marketing campaigns. The answer to this research question was obtained through expert interviews with experts from sector organizations and social media marketing companies. The consulted experts confirmed it was possible to use a myriad of personal information but their actual use was limited to age, gender, location and language. The main reasons are the unreliability of the data, legal insecurity and fear of scaring potential customers with privacy invasive questions.

Keywords: Social media, value network, privacy, targeted advertising.

1 Introduction

Previous research has shown an increase in both disclosure of personal data [1] and means to gather this data [2] on social media such as Facebook. On the other hand data gathering and profiling have been conceptualized as black boxes for users in a legal way [3] but also in users' understanding of targeted advertising [4] or their manipulation of privacy settings [5, 6] and authorization dialogs [7].

The aim of this research is to map how a subset of Belgian social media marketing companies are organized as a value network and secondly how they use social media users' data for marketing campaigns. This is motivated by the current opaqueness of these processes illustrated in previous research. But it is also necessary to inform current policy and legislation, which aims to regulate these practices. Lastly, this knowledge should also be used to illuminate how commercial entities influence algorithms, which are our gatekeepers in online and social communication [8, 9].

The answer to this research question was obtained through expert interviews with experts from sector organizations and social media marketing companies. The consulted experts affirmed the fact that it is possible to use a myriad of personal information although the actual use was limited to age, gender, location and language. The

main reasons are the unreliability of the data, legal insecurity and fear of repelling potential customers with privacy invasive questions.

The structure of this research paper is as follows. It first elaborates on the needed key concepts, which are social media, Personal Identifiable Information and value networks. After that the Belgian marketing sector is contextualized. The research outline of our expert interviews is described next. This is followed by the results, the conclusion and limitations of this research.

2 Concepts

The scope of companies that we research is limited to companies that market on behalf of advertisers in Belgium. Social media must therefore be an integrated part of their marketing products. For this we need to define the two ways social media can be used for marketing purposes. The most obvious way to use social media is to create an advertisement and use the provided targeting options, which are based on profile information submitted by the user. The targetable criteria for Facebook as example are country, town or city, age, gender, interests and connections (with other users or pages on Facebook) [10]. LinkedIn uses similar data, also derived from profile information and activities on the service [11].

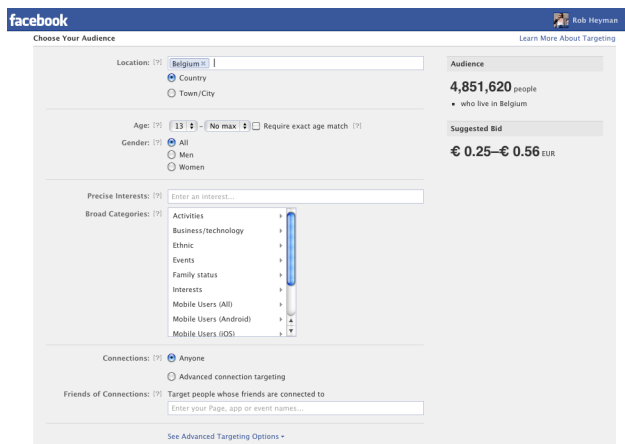


Fig. 1. Facebook's advertising interface

The second mode to use social media for marketing purposes is by obtaining data from users by connecting to their API [2]. Facebook, LinkedIn and Twitter offer this possibility through applications and websites. The owner of a website or application can ask basic credentials for the registration or more elaborate information through

extra permissions. The protocol used to authenticate these applications and websites is called OAuth¹.

2.1 Social Media

We define social media as ‘a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content.’ [12] Social network sites (SNS) [13] or online social network services (OSN) are a special instance of social media that focus on the creation of a network and a user profile. Social media is broader and therefore incorporates the micro blogging service, Twitter, which does not require these networks.

2.2 Personal Identifiable Information

Personal information is here defined as Personal Identifiable Information (PII), which originated in the K-anonymity approach [14, 15]. Sweeney [15] introduced K-anonymity to prove that anonymized databases are not anonymous if they contain unique records that may be linked to other databases with names and overlapping information. An IP-address is unique although this is not considered nonymous it may identify people when combined with other data. Sweeney proved this by combining an anonymized medical database with the voter registration of Massachusetts. We need this concept to show that the dichotomy of anonymous and its counterpart, identifiable information will not be made when looking at data in our research. This is motivated by the fact that anonymous information may still uniquely identify a user. In this case K, representing the smallest number of records sharing the same characteristics, is one. If $K = 1$, each user is uniquely identifiable. If $K > 1$, the data are aggregated in such a way that users are no longer uniquely identifiable.

2.3 Value Networks

Value network analysis [16–18] is an approach to evaluate business models within an environment of other businesses. It is used in a normative way to evaluate, which configuration of companies and underlying relations begets a perfect fit. A perfect fit is a situation where the configuration of roles, actors and relations is fair and viable on the long term. This research uses the value network perspective in a descriptive way to map the use of data within the social media marketing sector.

“A role is a distinct value-adding activity within the value network, which potentially can exist as a commercial entity in the marketplace, with its own cost and revenue balance” [16]. Actors are the commercial entities that function within a market by integrating one or more roles. Relationships are the interactions between roles or actors and are usually shown as arrows in diagrams which depict a monetary transac-

¹ For further reading visit <http://oauth.net/about/>.

tion, service or a tradable good [16]. In this paper, these arrows will represent the flow of PII.

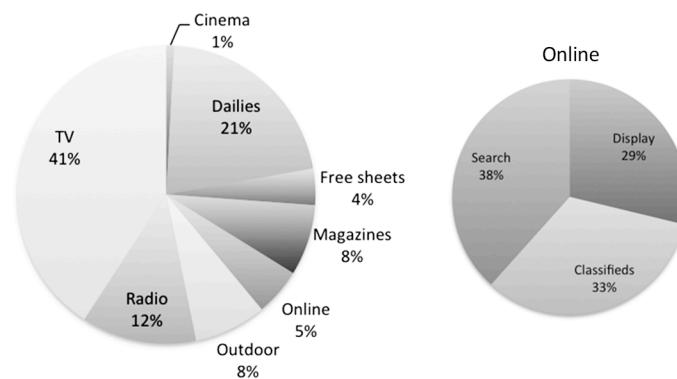


Fig. 2. Belgian Advertising Spending overview 2011. Source Adex Benchmark 2011 and UBA Jaarverslag

3 Situating the Belgian Value Network of Social Media Marketing

To situate the Belgian value network within the other advertising venues, the Belgian Union of Advertisers² annual report [19] was consulted. IAB³ Europe's Adex Benchmark 2011 [20] presents a backdrop to compare the Belgian situation within Europe. UBA reported on online display advertising, which incorporates social media spending. Online spending normally also includes classifieds and search. Online spending was 183 million € for 2011, which is 5,1 % of the total measured advertising expenditure for Belgium in 2011. The global Belgian advertising expenditure rose with 2,9 % while online increased with 8,9 % when compared with the previous year. According to IAB classifieds and search were responsible for two thirds of total online advertising expenditure, which implied that online would represent 17,1 % of the total media spend in Belgium. Belgian online ad expenditure is on the lower end with the UK and the Netherlands leading with respectively 35,9 % and 27,9 % and Austria as the lowest with 13,0 % within Western Europe.

² Unie der Belgische Adverteerders (UBA), for more information visit <http://www.ubabelgium.be/>.

³ Interactive Advertising Bureau (IAB) for more information visit <http://www.iab-belgium.be/>.

4 Research Outline

The results were obtained through expert interviews [21], which were conducted in two waves. The first wave consisted of interviews with directors of sector organizations that represented firms which are part of the social media marketing value chain. These organizations are BDMA, IAB, UBA and ACC⁴. All interviews were performed in the summer of 2012⁵. The second wave consisted of interviews with actors within the value network.

We have found two distinct definitions of experts in two disciplines: international business studies [22, 23] refer to ‘elites’ while Pfadenhauer [21] situates ‘experts’ in the qualitative interview methodology. Both terms were kept as they point out different aspects important to our sampling strategy.

‘Elites’ are defined as: “an informant {...} who occupies a senior or middle management position; has functional responsibility in an area which enjoys high status in accordance with corporate values; has considerable industry experience and frequently also long tenure with the company; possesses a broad network of personal relationships; and has considerable international exposure.” [23] As they use their knowledge, they reshape their environment: “By becoming practically relevant, the experts’ knowledge structures the practical conditions of other actors in their professional field in a substantial way.” [22] Although elite and expert were used, they both referred to a professional who does not only have expert knowledge but is also participating within his field of expert knowledge. We will refer to this kind of expert as participating expert.

Pfadenhauer on the other hand conceptualizes the ‘expert’ as a meta-specialist, who “knows what the (respective) specialists know in their fields of knowledge - and how what they know relates to each other” [21]. The expert is here defined as an observer or even an outsider who does not partake as an actor within the value network. These experts will be referred to as observing experts.

We have identified the following sector organizations as observing experts who were contacted to situate the value network but also to refer us to participating experts: BDMA, IAB, UBA and ACC. We have omitted sector organizations that did not have a direct link with online advertising⁶.

The selected organizations share more or less the same goals: they wish to defend their profession from overregulation and they achieve this by lobbying and self-regulation on a national and international level. They wish to promote their profession through education, networking and research [19, 24–26].

⁴ Belgian Direct Mail Association (BDMA) for more information visit <http://www.bdma.be/> and the Association of Communication Companies.

⁵ The exact dates can be found in the annex of this paper.

⁶ Belgian Union of Daily Publishers (BVDU), the Federation of Belgian Magazines, Union of Publishers of Periodical Print (UPP), Association of Billboard Owners (AEA), Belgian Union of Audiovisual Media (BVAM). BVDU www.fleetproject.be, the Federation of Belgian Magazines www.theppress.be, UPP www.upp.be, AEA (has no online presence), BVAM www.abma-bvam.be.

These sector organizations were chosen because of their general expert knowledge about the sector, but also because they were able to introduce us to the other experts we were interested in. These are the CEOs or employees responsible for social media marketing. The introduction or referral from known authorities increases the likelihood of a positive reply [23]. Below is a representation of the actual course of interviews. The second wave experts were also asked to refer to experts, which sometimes created a longer chain of interviews.

- Jo Caudron, DearMedia founder and President IAB
 - Patrick Marck, General Manager IAB
- Greet Dekocker, Director BDMA
 - Philippe Arnauts, Marketing Manager WDM Belgium
- Erik Tamboryn, President of Comité van toezicht BDMA
- Chris Van Roey, CEO UBA
 - Nathalie Hublet, Media Manager UBA
- Luc De Leersnyder, CEO ACC
 - Rob van Alphen, Social Business Consultant
 - Bart De Waele, CEO Wijs
 - Anthony Bosschem, CEO and Founder of Darwin and former Talking Heads employee

The interviews were semi-structured. Questions were prepared according to the expert the researcher was facing. All guides were grounded on the same research questions to guarantee uniformity. The questions mapped the value network, how they used PII in general and on social media, how they used social media and lastly how they incorporated privacy in their products. A topic guide can be found in the annex of this paper.

The interviews took at least one hour or to one hour and a half depending on the expert's need to ask for more clarification or elaborate further on the main research questions. All interviewees agreed to be recorded. The interviews were summarized and grouped per distinct role and research question.

5 Results

Before discussing the results figure 3 should be explained because it represents the results in a value network diagram. Light grey boxes were used to identify actors. These actors have white boxes, which contain the roles they perform. Dark grey boxes were used to refer to companies that were important to the interviewed actors either as a starting point or endpoint of the service. We will discuss the most important roles within this value network. These roles are strategy, concept, coaching, build &

launch, operate and evaluation. Afterwards we elaborate on the consulted experts' practices with regard to PII, which are targeting, evaluation and CRM⁷.

The arrows between actors and roles symbolize the flow of PII. The arrows drawn on figure 3 are dotted if the transaction of PII is aggregated ($K > 1$). The full lines refer tot transactions involving PII that can uniquely identify a user ($K = 1$).

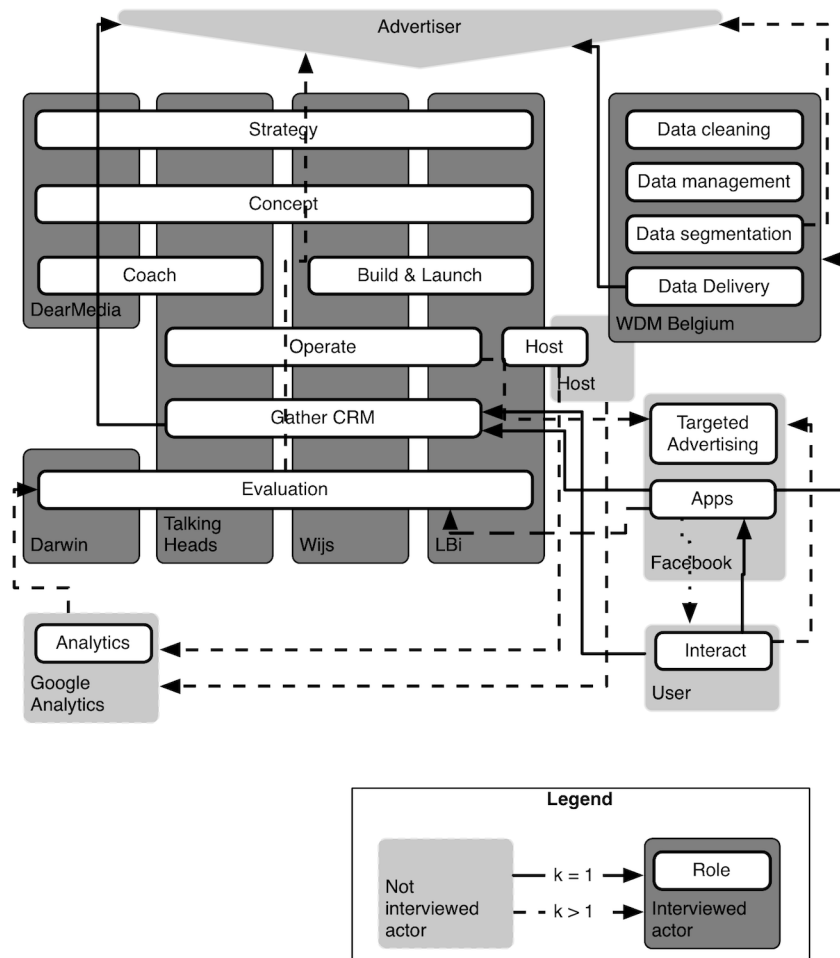


Fig. 3. Belgian Social Media Marketing Value Network

Four out of the six consulted actors plan the strategy of a company that wishes to advertise. They assess the advertiser's position and then evaluate whether a social media marketing approach is adequate. Wijs and LBI provide other online channels as

⁷ Customer Relationship Management (CRM) is the model companies use to build and maintain a relation with their current and future customers.

well. In the concept phase and role, the strategy is further operationalized in concrete measurable steps, which are evaluated during the evaluation role.

The following roles contain the actual building and execution of the proposed concept: coach, build, launch and operation. This is when websites are built, advertisements are made and other social media actions such as creating and maintaining social media presence are executed.

Social media is not only used for its advertising purposes, it is also used to talk with consumers or to provide the content related to their brand. When advertising is used, it is always targeted as we will explain in section 5.1. The consulted experts were reluctant to try more than the basic advertising format shown on the right hand pane. Sponsored stories, updates that contain advertorial content, which are shown in the News Feed were used sparingly. Participating experts were unsure about these advertising products due to their obtrusiveness but also because they were shown too often⁸.

5.1 Roles Requiring PII

When a medium is chosen or when an advertisement for a social media platform is made, an audience is targeted. The criteria for this audience are defined during the strategy and concept phase of the campaign. Broad categories that fit the advertiser's goal were preferred and they contained the following criteria: gender, age, location and education. The experts refrained from using categories such as likes or interests because these were less reliable. For example many different product pages of the same product exist and users may also like objects like a Ferrari without ever having the intention to buy one. Another reason to refrain from using more specific targeting criteria is Belgium's small market. Too much segmentation would exclude too many users.

A campaign's performance is evaluated through a funnel. A funnel is a technical and strategic way to evaluate performance. Measuring points are implemented on each step of the marketing process. Each number of users per step is compared to the number of the previous step in order to see how many users exited the funnel before they completed the marketing goal. Darwin offers this role as its only value proposition; to measure and report on the various social ads or social media platforms. This feedback information is required to increase the budget of high-performing actions and remedy the low-performing actions. The data required for evaluation purposes is aggregated ($K > 1$) and there is no need to uniquely identify a person.

This aggregated data of the evaluation process is very important because it is used to evaluate the efficiency of the marketing campaign. This is not only used to convince advertisers, the same data is reused in the operation phase to target the most efficient audience. The data are also important for attribution. Each publisher needs to report how many visitors saw the ad (this is called reach) and how many people interacted with the advertisement (this is called performance). Without these metrics it is

⁸ Rob van Alphen, interviewed by Rob Heyman 2012, July 4.

impossible to bill advertisers because payments are based on reach or performance per number of users.

Lastly, WDM Belgium, LBi and Wijs gathered uniquely identifiable PII such as name and address for CRM purposes. This is the only instance where PII is gathered and kept identifiable. Otherwise the data is stripped from directly identifiable categories in order to render it anonymous (according to the consulted experts). In the case of CRM all interviewed experts were reluctant to ask for too much information because this could repel users from taking the next step in the marketing funnel. As little uniquely identifiable data as possible is gathered for three other reasons as well: to remain within legal boundaries. Because it is hard to foresee what information would be useful in future occasions⁹ and lastly advertisers lack the necessary infrastructure to store data.

PII is either gathered on Facebook through a dialog box, which authenticates third parties' access to social media APIs. WDM Belgium, LBi and Wijs preferred to ask data through forms on an external website. This happens for two reasons, Facebook does not allow application owners to store this data permanently. Secondly, these companies prefer to display their privacy statement on their own websites where a clear opt-in is guaranteed. Data most often required for CRM oriented campaigns, are preferences directly related to the advertiser's product categories and contact information¹⁰.

It was already mentioned that most advertisers were lacking the proper means or knowhow to store PII for CRM purposes¹¹. This is the main reason why companies such as WDM Belgium exist. Next to the previously stated roles, this company also implements data management systems for CRM. It also provides data cleaning and segmentation services. This is the only company we interviewed that sold data mining services. Social media was being tested to deduce extra information but it was deemed unreliable compared to other CRM data because users are less prone to use their real identity. This in turn illustrates why Facebook and Google implement a real name policy.

6 Conclusion

This research leads us to conclude that what is technologically possible in social media marketing is not necessary implemented by this subset of Belgian actors. Targeted advertising was limited to very broad target audiences and data gathering was also limited. The motivation to limit the use of these privacy intrusive tools was economic. None of the interviewed companies could afford to lose users (or clients) due

⁹ Jo Caudron, interviewed by Rob Heyman 2012, July 11.

¹⁰ Rob van Alphen, interviewed by Rob Heyman 2012, July 4.

¹¹ Erik Tamboryn, interviewed by Rob Heyman 2012, July 6. Greet Dekocker, interviewed by Rob Heyman 2012, July 10. Philippe Arnauts, interviewed by Rob Heyman 2012, September 5.

to legal problems or being too intrusive towards users. Privacy was thus seen as a means to obtain something else and not a value in sich.

PII had to be uniquely identifying in two cases. First PII are used to count individual actions of users, but these are saved aggregated because they only need to be reported in total number of users for billing, evaluation and efficiency purposes. Secondly, PII is kept as $K = 1$ if and only if an advertiser specifically requests to keep this data for further CRM campaigns.

7 Limitations

The examples in this research and during the interviews were biased towards Facebook. This is due to its popularity but also the fact that Twitter for example cannot be contacted for advertising purposes in Belgium.

The researcher's focus was biased towards advertising instead of marketing before the advent of the interviews. The experts have pointed out that social media can also be used to create content and attract users without paying social media.

Lastly, more Belgian actors need to be interviewed within two categories that were under represented in this sampling; app developers and cross-media agencies.

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9 Appendix: Interview Guide

Questions to map the value network

- What is the core business of the sector your organization represents?

- Could you sum up the services of these companies?
- Who are the most important clients? i.e. what kind of company?
- What are the most popular services?
- Are these companies dependent of other companies?
- What are the most important companies they rely on?

Questions about their use of personal data in services

- Where is personal data used (either anonymous or identifiable) in their services?
- What are the different uses of personal data?
- How is personal data obtained?

Questions related to social media use

- How is social media used in companies represented by your organization?
- What are the most used social media platforms?
- What services are used within Facebook and other named platforms?
- What approaches work in social media?
- What approaches do not work?
- Do you segment data in order to target?
- What are the most important types of data to perform targeting?