Abstract: The intention of an online visitor, from an online social networking, is to see the most valuable pieces of information. The intention is hidden and can only be partially revealed from implicit indicators in the traces users leave behind while they browse through many social media websites. As a consequence, he either gets the desired information or product, or he gets redirected somewhere else. In general, one part has a concept of the purpose of the visit and the concern of the other part is to resolve this concept as accurately as possible. This paper approaches the question of special Web metrics for the Digital Influence measuring. A survey of the metrics for them is presented in this paper. Also, here we suggest a methodology for researchers in this discourse area.

Key-Words: Web Metrics, Web Analytics, Social Media Measurement, Digital Influence

1 Introduction
Measuring and understanding your web site's performance is a critical process that is sometimes overlooked. Knowing how and why your site performs the way it does, however, can lead to greater success. Traffic alone does not make a site successful. Measuring actual results against those goals tells you how well your site is succeeding.

Because the metrics originate from diverse areas such as classical infometrics, library science, information retrieval, sociology, hypertext and econometrics these metrics are important in Social Media measuring, in our case to measure Digital Influence. A hard influence acts in a different web sites applications. A study of these metrics is a starting point for developing these models which can eventually aid Web content providers in enhancing web sites and predicting the consequences of changes in certain attributes. Digital technologies open the door to new kinds of Digital Influence measuring for the analysis of business processes. As you travel the Web, everywhere you go and everything you do leaves a trail of bits – a virtual calling card that can illuminate your online activities. Ultimately, site success depends on how well your site performs with respect to your goals.

A useful aspect of measuring is the ability to observe others who are bookmarking the same resource. So bookmarking your own Web site will allow you to record the numbers of people who bookmark your site. This may be a useful indicator, if the social bookmarking service you use is popular with your target audience. Analysis of Web sites, mailing lists, Blogs, etc.: Search engines such as Google, Technorati, etc. may enable you to find comments about your Web site, but also provide various metrics which may be useful.

2 Web Metrics

2.1 Metrics for Web Analytics
Metrics is generally referred to as a way to measure data. Metrics are used in business model, CMMI (Capability Maturity Model Integration), ISM3 (Information Security Management Maturity Model) and knowledge management. These measurements or metrics can be used to track trends, productivity, resources and much more. Typically, the metrics tracked are key performance indicators.

Web metrics, also sometimes referred to as Web analytics or site traffic reporting, is the study of website traffic and activity, as well as a measurement of the behaviour of visitors to a website. In a commercial context it especially refers to measures the performance of the websites. This obtained data is typically compared against key performance indicators for performance, and used to improve a web site or marketing campaign's audience response.

Researchers of Web measurement can be classified into those who are interested in issues relating to the Web as an international network of systems and those researchers interested in the quality of websites. To illustrate the extent of web metrics a taxonomy devised by [7] is presented in Figure 1.
3 Digital Influence Measuring

3.1 Components of the Social Media

Social Media is a term that refers to a collective group of web properties that are primarily driven by the users. Social media can take many different forms, including message boards, weblogs, wikis, podcasts, pictures, and video. Digital Influence is a term used to describe the influence public opinion by the mean social media component. For example, in the Internet marketing context the Digital Influence acts through viral marketing. An online advertising approaches that functions somewhat like word-of-mouth. The "viral" refers to how quickly it propagates, but its purpose is not to cause damage like a computer virus, but to make an offer available to the masses. The ad (advertisement) is disseminated via links in e-mail, blogs and Web sites that all point to some service or product people might want, whether free or paid.

There are multiple social media components that contribute to the digital influence by the connections between: blogs, vlogs, podcasts, videocasts, webcasts, micro-sites, wikis, viral marketing, webisodes, and other interactive vehicles that engage people. For example, blogosphere (all blogs and their interconnections) provides an interesting opportunity to study social interactions including spread of information, opinion formation and influence.

![Figure 5. Diagram that represents a influence graph from blog graph [9].](image)

In Figure 5 the diagrams shows the conversion of a blog graph into an influence graph. Through original content and commentary on topics of current interest, bloggers (the person who writes Weblogs) influence each other and their audience. A link from $u$ to $v$ indicates that $u$ is influenced by $v$. The edges in the influence graph are reverse of the blog graph to indicate this influence. Multiple edges indicate stronger influence and are weighed higher [9].

A few prominent examples of social media applications where Digital Influence acts are:

- Social networking: MySpace and Facebook
- Presence apps: Twitter
- Video sharing: YouTube (video sharing)
- Virtual reality: Second Life
- Events: Upcoming
- News aggregation: Digg, Reddit and Stumbleupon
- Photo sharing: Flickr and Zoommr
- Livecasting: Justin.tv
- Episodic online video: Stickham, YourTrumanShow
- Media sharing: ShareNow and Pownce
- Social bookmarking: del.icio.us
- Online gaming: World of Warcraft
- Game sharing: Miniclip.com
- Social shopping: Amazon.com

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Figure 4. Domain-specific quality factor definitions, characteristics and enablers [8].

Each of the quality factor definitions is tabulated together with a summary of its characteristics and combined with a summary checklist of enablers for each factor. These enablers are a simple set of considerations that influence each quality factor and have been derived from the literature review.
Social media guru Jeremiah Owyang keeps a good list of links to most every social media metrics company over at his blog but many are priced out of reach of medium and small wineries [10].

3.2 Metrics for Digital Influence
Metrics are the attributes or factors that are important for Digital Influence to determine results or make improvements.

3.2.1 Basic Metrics
To measure how many visitors and who visits the Web pages:
- the measurement of the number of times that the pages were viewed, by any visitor,
- the number of trips made to the site,
- the number of actual people who have come to the site,
- visitor info:
  - the location of the visitors
  - the type of software/hardware used by them
To find out what the visitors are doing:
- the measurement of the time that each visitor spent on the site,
- the % of visitors who only view a single page
Traffic and content:
- the measurement of the referrers – the web sites that directed visited to you
- the measurement of the pages from which visitors entered or left the site
- the measurement of the words that visitors are using to find your site
- click analysis – a view of how many are clicking on what on each page

3.2.2 Advanced Metrics
More advanced metrics are:
- goal conversion – how many people made a series of steps to your desired goals (i.e. signup, purchase, donation, etc)
- audience
  - the type of people who visit the site
  - the number of trends used for unique visitors
- engagement (interaction and attention)
  - what do visitors click on
  - how long do visitors stay
  - how many people comment on posts
  - what shape does the conversation have
  - how many comments have you posted
- e.g. Online customer engagement is qualitatively different from offline engagement as the nature of the customer’s interactions with a brand, company and other customers differ on the internet. Discussion forums or blogs, for example, are spaces where people can communicate and socialise in ways that cannot be replicated by any offline interactive medium
  - loyalty
    - the number of RSS (Really Simple Syndication standard) subscribers (trends, not actual numbers)
    - the number of repeated visitors
    - how many people tell other people about your site
    - grain of salt
  - influence
    - the number of influential ideas (memes, and their intensity over time)
  - intent/action
    - the set of goals
    - conversion rate
    - qualitative data
- the link to goals, strategy, and decisions
  - goal (the most important goal)
  - benefit (how successful you are)
  - metrics (the attributes being measured)
  - measurement (how the data is measured, what data, which tool do you use)
  - map (the strategy you are using)
  - value (the value or cost of success).

3.2.3 A Methodology
There are many methodologies which allow the measuring of Digital Influence. Proposal taxonomy for researchers to social media measuring is showed in Figure 6 [13].

Figure 6. Taxonomy of the Social Media Methodology.
The six methodological steps that we need to follow in Digital Influence measurement are [13]:
1. Set your objectives:
   a. Make them measurable
   b. What do I want to happen by when?
   c. Change in attitudes and/or behavior
   d. Outputs, outtakes and outcomes
   e. Without objectives, measurement is meaningless
2. Define your stakeholders – community of stakeholders
3. Determine which metrics to use:
   a. Relationships
   b. Analytics
   c. Outcomes
4. Benchmark against yourself over time or your competition
5. Pick your measurement tool
   a. Free: Technorati (number of links, “authority”), Del.icio.us (quality and type of coverage), Google Analytics (site statistics), Veoh (video views on all platforms), Flickr (photo views), Feedburner (subscribers), Google Blog Search (Poor man’s clipping service), Yahoo Pipes (manage RSS), Compete, Alexa (traffic), Quantcast (rating and demographics)
   b. Paid: The CGM Dashboard (link), Radian6 (link), BuzzLogic (link), Jeremiah’s List (link).
6. Analyze the results and start over.

3.3 Tool for Digital Influence Measuring
There are several good analytics services available, both commercial and free analytics services. A popular analytics tool, that collects data on web site user’s behaviour, is Google Analytics. In Table 1 are presented some commercial tools for Web Analytics.

<table>
<thead>
<tr>
<th>COMMERCIAL TOOLS FOR WEB ANALYTICS</th>
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<tbody>
<tr>
<td><strong>Click Tracks</strong></td>
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<tr>
<td><strong>Coremetrics</strong></td>
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<tr>
<td><strong>Google Analytics</strong></td>
</tr>
</tbody>
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Sources: Company press releases and web sites.

Table 1. The main commercial tools for web analytics.

As you climb up the scale of cost for these packages, you'll find that the free ones will do some of the grunt work like the basic elimination of extraneous data, but the more expensive ones are more focused on delivering useful, business-oriented information. The list of specifications for these products is the following [11]:

- **flexibility** - Generic reports are good as far as they go, and the more types of reports you can get, the more you'll find specific ones that are the most useful,
- **archiving** - The better analysis tools offer compression and archiving to shrink the size of the files and classify them for future use,
- **output** - The better ones will do both, so that you can put the resulting data into other data visualization tools for even more informative manipulation. The upper-end tools let you compare month over month and integrate back-end data into your reports for a view of your e-business. Top-of-the-line tools give you reports that include non-Web data for a view of your business,
- **scalability** - The major players in the Web analytics marketplace can almost certainly handle your needs (almost certainly), but when you're looking at some of the free stuff that's out there, ask the scalability question before getting in too deep,
auditability - If you're going to sell ad space on your site, be sure the output from your metrics tools is compatible with your auditor's input requirements,

speed - The better tools use special indexing techniques to perform their functions faster.

When it's time to compare the speed of different tools under consideration, be sure to try them out with your data, on your machine, in your office. This combination of factors has a large impact on how well each software package will operate, and you owe it to yourself to test them all on an even playing field.

The majority web traffic analysis software package delivers a healthy amount of information for the money and tracks the following information:

Hits
- Entire site (Successful)
- Average per day
- Home page

Page Views
- Page views (impressions)
- Average per day
- Document views

Visitor Sessions
- Average per day
- Average visitor session length
- International visitor sessions
- Visitor sessions of unknown origin

Visitors
- Unique visitors
- Visitors who visited once
- Visitors who visited more than once

4 Conclusion
In this paper we classify the most relevant web metrics using a particular framework for Digital Influence metrics. As a result of this classification we obtain that most of the metrics are classified into the usability / exploitation / presentation cell. Another conclusion obtained from this study is that, in general, metrics are digitalized automatically and validated formally not empirically which is a good way of doing things. The proposed methodology for researchers is a practical and theoretical framework in Digital Influence metrics. The list of tools for Digital Influence metrics may be an effective way to improvement and optimizing Web applications and sites.

References: