REVISTA ESPACIOS

Services and mechanisms of competitive intelligence on the Internet

Servicios y mecanismos de inteligencia competitiva en internet

Sergey Vladimirovich SHAITURA 1; Konstantin Vasilievich ORDOV 2; Irina Georgievna LESNICHAYA 3; Yulia Dmitrievna ROMANOVA 4; Seda Seiranovna KHACHATUROVA 5

Contents

ABSTRACT:
The goal of the work is to analyze and study the methods of conducting competitive intelligence based on information services. The article analyzes methods of conducting competitive intelligence on the Internet, states the goals and objectives of competitive intelligence, and shows the possibilities of using geoinformation services in competitive intelligence.
Keywords: economy, competitive intelligence, geoinformatics, geoinformation modeling, geoinformation services

RESUMEN:
El objetivo del trabajo es analizar y estudiar los métodos para realizar una inteligencia competitiva basada en servicios de información. El artículo analiza los métodos para llevar a cabo la inteligencia competitiva en Internet, establece los objetivos y metas de la inteligencia competitiva y muestra las posibilidades de utilizar los servicios de información geográfica en la inteligencia competitiva.
Palabras clave: economía, inteligencia competitiva, geoinformática, modelación de geoinformación, servicios de geoinformación.

1. Introduction

The term "competitive intelligence" has a number of meanings (Yuschik, 2006).

Firstly, this term denotes the obtaining by one state of the secrets of another state, which is usually denoted as "intelligence" or "espionage".

Secondly, competitive intelligence is a professional target collection, processing and accumulation of information, which is usually called information and analytical work, information support of activities.

Competitive intelligence is a continuous process. The use of competitive intelligence becomes the determining factor of the organization's survival. Competitive intelligence is

a version of intelligence that is particularly adapted to the world of commerce. It is a systemic, continuous process of legitimately collecting information on the main components of business and business environment.

The *tasks* of competitive intelligence are the following:

- to provide the head of the enterprise with reliable information regarding the position of the enterprise in the environment;

- to be aware of all threats or opportunities in the environment, give a timely signal to the decision-makers.

The *decision-makers (DMs)* are the managers of the enterprise. Information obtained by the DMs from competitive intelligence is only part of the information that the DM is guided by when making a decision.

Experts of competitive intelligence operate with two key concepts: objects and sources.

Objects are resources (people, documents) that can answer the questions that may arise.

Sources are information resources that can help gain access to the objects directly or indirectly. Sources are divided into *internal* (inside the enterprise) and *external* (not working inside the enterprise) (Andreev and Ozherelyeva, 2012; Shaitura, 2015b; 2016d).

Sources can also be *primary* and *secondary*.

Information (Shaitura, 2012b; 2012c), from the standpoint of a competitive intelligence agent, can be:

- obtained directly from the carrier;

- obtained from the source;

- retold by someone.

According to the degree of the information openness, information is qualified as (Shaitura, 2016b; 2016c):

- publicly available information;

- information of limited availability;

- classified information.

Public information on the Internet can be obtained from websites and portals of governments, sectoral ministries, the Chamber of Commerce and Industry, Central and international banks, public organizations and journalists.

Obtaining *information of limited availability* requires some additional actions: working with people and documents.

The *secret information* is information that is specifically hidden by its owners and that cannot be bought, because it is not sold in any case. Spies are used to obtain this information. Obtaining this information refers not to competitive intelligence but rather to industrial espionage.

90% of the information can be obtained from open sources.

The finished analytical product contains not only information, but also judgments, conclusions and forecasts based on this information.

The *information processing* includes the following actions (Shaitura, 2016a; Shaitura, et al., 2017; Shaitura and Sumzina, 2017):

- collect;

- distribute;

- protect;

- use properly.

Information processing cycle (Shaitura, 2016g; Sumzina and Shaitura, 2017; Shaitura and Sumzina, 2017) is the following:

- determine what information is required;

- collect the necessary data;
- convert collected data to the final product – information;
- ensure timely delivery of information obtained by DMs.

Competitive intelligence in an enterprise can *solve the following issues*:

- predict changes in the market;
- predict the competitors' actions;
- identify new or potential competitors;
- draw conclusions based on successes and mistakes of other companies;
- track information related to patents and licenses;
- evaluate the feasibility of acquiring a new business;
- explore new technologies, products and processes that may influence the business;
- study the political, legislative and regulatory changes that may influence the business;
- justify the need to set up a new business;
- assess the business from the outside;
- help use the latest business tools;
- turn the enterprise's weaknesses into competitive advantages;
- detect changes and respond before it becomes too late;
- identify potential sources of information leakage;
- identify weaknesses of competitors;
- collect information about partners and clients.

2. Materials and methods

Publications on competitive intelligence (Yuschik, 2006), geoinformation services (Shaitura, 2012b; Gavrilova and Shaitura, 2016; Shaitura, 2015a), geoinformatics, information resources and information systems' building technologies (Shaitura, 2012a; Shaitura and Rustamov, 2006; Shaitura, 2016f) were used as materials. Geoinformation approach, system and categorical analysis were used as methods (Shaitura, 2016e; Shaitura, 2015c).

3. Results

3.1. Internet as a tool for competitive intelligence

The volume of information on the Internet increases in a logarithmic scale. Search engines already index only 5% of the information contained on the Internet. A specialist in competitive intelligence must be able to purposefully extract the necessary facts from information debris.

A *search server* is a local network of powerful computers connected to an Internet access with very broad bandwidth.

Search robots are constantly moving across the Internet, scanning millions of pages per minute. The robot reads the text on the website and uploads it to the server; once it sees a link to the website, it goes there and the process repeats. The website administrator can invite the robot to the website by filling out a special form on the search engine website. This is usually called website indexing.

Invisible Internet is part of pages that are not indexed for some reason. There are 4 types of invisibility: non-transparent pages, pages not intended for public viewing, private pages and really invisible pages.

Non-transparent pages are pages that could have been indexed but weren't.

Pages not intended for public viewing are created by setting a password, using a robots.txt file, or using the noindex meta tag.

Really invisible pages are those that cannot be indexed for technical reasons (program files, images, archives, data contained in databases).

3.2. Competitive intelligence in social networks

Many different websites have appeared recently that offer various interest groups of people to communicate online. People are willing to collect, analyze and disseminate information from various sources. This area of activity is called social intelligence.

Emergence of complex tools, such as rating indicators, allows to make the analysis of social networks a powerful addition to existing methods of competitive intelligence. The most common are Google Alerts, TweetDeck and HootSuite.

1. Google Alerts – tracking mentions

This is a very simple and easy-to-use tool for delivering reports about the companies and brands the user is interested in directly to the mailbox. Every time a brand is mentioned online and identified by search bots, information about new materials with links is sent to the user's email address. The user is able not just to monitor keywords but also to configure the frequency of notifications and the type of parameters to monitor.

The software is useful for getting links to competitors' sites, monitoring the user company's mentions in social media and various keywords.

It is provided for free.

2. Topsy – a tool for social media

This is a tool aimed at working with Twitter. It allows to track tweets of competitors back to 2006 and collect detailed statistics on tweets by companies and brands enabling detailed analysis and charting.

Topsy provides a lot of information about the companies that use Twitter.

Aside from the free version, there is also a pro version with advanced capabilities for monitoring and processing information.

3. Marketing Grader – tracking mentions

This is an excellent tool for rapid visual analysis of competitors' activity in social media, blogging, in the field of SEO, and leads generation.

It is best to use to monitor the online activity of competing companies and build a picture of search engine optimization for competing websites.

It is provided for free with the support of HubSpot.

4. Competitive Research & Keyword Research Gadget – analysis of competitors and keywords

This tool collects data directly from the user's website and serves as a widget rather than as an independent tool. It adds a small button to the user's website, which leads to the detailed competitive analysis.

It works best for aggregating data by competitors' online actions and strategies and can be combined with other tools.

The software is provided for free.

5. InfiniGraph – working with social networks

The software provides visually-focused tracking for monitoring activity in social media. It builds comprehensive and illustrative charts based on data on the user's competitors.

It can be used by users who would like to track trends in social networks and know the full portrait of their audience. Its most important feature is that it is completely free.

6. Google Keyword Planner – keywords

The software was previously known as Google Keyword Tool and Traffic Estimator. The main

object of its research is keywords. The Keyword Planner was developed by Google, and therefore can be called one of the best tools for determining paid and organic keywords from competitors. The software can also be used for monitoring the keywords of the user's own website.

It requires a free AdWords account for use.

7. Monitor Backlinks – matching keywords

This is a relatively new tool, which is nevertheless convenient for tracking backlinks and keywords. The user can also track incoming links for keywords with dofollow or nofollow parameters. The resulting data can be downloaded or compared with previous periods and various competing projects.

The software can be used by everyone interested in competitive analysis for keywords and incoming links.

8. SpyOnWeb – identifying different websites with a common owner

This is quite a popular and simple tool. The user just needs to specify URLs, Google AdSense or Google Analytics codes, or specify IP – and all the online resources that belong to the same owner will be found.

The software is available for free.

9. SimilarWeb – website rankings and popularity analysis

It allows to receive insights on traffic for almost any website: collects search engine rankings, rankings within the country or category, leaders' level from general search, social media, advertising traffic, and demonstrates many other figures of competing projects.

The service can be used for free.

10. What Runs Where – monitoring online advertising

It supports access to more than 40 advertising networks in various countries, enabling to track competitors and their actions in various advertising networks. The user can also turn on the notification system for new content uploads from competitors.

11. Open Site Explorer – searching for all references to the website

It allows the user to evaluate the efforts of competitors in establishing the reference weight. It evaluates such indicators as domain and its authority, PageRank, availability of anchor text and comparative links.

The best way to use it is to evaluate incoming links and compare the user's activity based on the reference weight with the competitors' actions and figures.

12. Simply Measured – universal monitoring tool

This is another visual tool for advanced analysis: trends, traffic, activity in social media, and up to 35 different types of reporting on the user's competitors.

4. Discussion

The competitive intelligence agent has a wide range of tools for working in global networks today. It is the selection of keywords and searching them, as well as statistical evaluation of the frequency of use of these words. Possibilities to search for geospatial information, which is also important in competitive intelligence, are beyond the scope of this article. This includes geomarketing – the search for places to set up new points of business. There is also a large range of information and analytical services for business valuation.

5. Conclusion

The article has set forth the goal and tasks of competitive intelligence. The means of achieving these goals have been shown. The importance of researching websites on the Internet for obtaining information has been emphasized. The analysis of software tools of the competitive intelligence agent has been conducted.

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1. Russian State University of Tourism and Service, 99, Glavnaya street, Cherkizovo, Pushkino district, Moscow region, 141221. E-mail: swshaytura@gmail.com

2. Plekhanov Russian University of Economics, 36, Stremyanny lane, Moscow

3. Plekhanov Russian University of Economics, 36, Stremyanny lane, Moscow

4. Plekhanov Russian University of Economics, 36, Stremyanny lane, Moscow

5. Plekhanov Russian University of Economics, 36, Stremyanny lane, Moscow

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