

Цель. Анализ и выявление специфики маркетинговых коммуникаций через социальные сети на примере специальных исследований, проведенных в Литве.

Методика. Для того, чтобы представить ситуацию и специфику использования социальных сетей в маркетинговой коммуникации были использованы следующие методы: сравнительный анализ научной литературы, изучение конкретных примеров, наблюдения за использованием социальных сетей, сбор и обработка данных, анализ полученных результатов.

Результаты. Чтобы подчеркнуть изменения и наметить возможности социальных сетей в маркетинговой коммуникации были проведены два исследования: первое – исследование особенностей использования социальных медиа Литвы; второе – исследование использования социальных сетей в маркетинге (сравнение Литвы, России, Украины, Германии, Нидерландов и Израиля).

Научная новизна. Эта статья исследовала социальные сети в маркетинговой коммуникации с двух точек зрения: первая – восприятие и привычки по-

ребителя; вторая – восприятие компаниями социальных сетей и интенсивность имплементации в Литве по сравнению с Россией, Украиной, Германией, Нидерландами и Израилем.

Практическая значимость. Развитие информационно-коммуникационных технологий (ИКТ) приводит к новым способам маркетинговой коммуникации и вынужденному появлению новых научных проблем. Растущая важность общения и взаимоотношений с клиентами зависит от быстрого развития и динамических изменений электронных рынков. Понимание и реализация инновационных инструментов для общения с пользователями в Интернете позволит усилить взаимодействие, которое имеет жизненно важное значение в настоящее время.

Ключевые слова: интернет-маркетинг, он-лайн реклама, e-бизнес, e-потребитель, изучение Литовского e-рынка, поведение потребителя

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V.A. Netsvetaiev, Cand. Sci. (Tech.), Associate Professor,
O.I. Sharov, Cand. Sci. (Geol.-Min.), Professor,
Ye.V. Kochura, Dr. Sci. (Tech.), Professor,
L.A. Maneliuk

State Higher Educational Institution "National Mining University",
Dnipropetrovsk, Ukraine, e-mail: vnetsvetayev@gmail.com

CLASSIFICATION AND RANKING OF CORPORATE WEBSITES OF INDUSTRIAL ENTERPRISES

В.А. Нецветасв, канд. техн. наук, доц.,
О.І. Шаров, канд. геол.-мін. наук, проф.,
Є.В. Кочура, д-р техн. наук, проф.,
Л.А. Манелюк

Державний вищий навчальний заклад „Національний гірничий університет“, м.Дніпропетровськ, Україна,
e-mail: vnetsvetayev@gmail.com

КЛАСИФІКАЦІЯ ТА РАНЖИРУВАННЯ КОРПОРАТИВНИХ САЙТІВ ПРОМИСЛОВИХ ПІДПРИЄМСТВ

Purpose. Creating methods of classification and ranking of commercial sites of industrial enterprises which take into account the specific characteristics of marketing sites, determining the level of presented content, particularly e-business, and is characterized by its commercial viability.

Methodology. The system of local performance criteria of the commercial sites proposed, their reduction to digital form was formalized. The values of the global benchmark sites of coal energy and mining-metallurgical complexes were calculated, their ranking was performed.

Findings. We have developed composed system of classification and ranking of commercial industrial sites, examples of its use for energy and coal-mining projects.

Originality. For the first time we have proposed the method of commercial industrial sites classification, taking into account the large number of local performance criteria made which were transformed into one global criterion for ranking.

Practical value. We have proposed the method of classification and ranking of sites of industrial enterprises allowing them to identify weaknesses and improve efficiency of e-commerce.

Keywords: e-commerce, corporate sites, classification, ranking

Statement of the problem. Questions “how to categorize a commercial site”, and “what parameters sites must be

considered when classifying and ranking them” are among the most important in the performance of market research on the Internet and to determine the priority of search results by keyword.

Isolation of unsolved problems. The currently used methods of classification and ranking of sites of industrial enterprises do not consider the specific characteristics of marketing sites, determining the level of presented content, particularly e-business, and did not accurately characterize its commercial viability. Indicators for such classification and ranking quite a lot and they are mostly qualitative in nature, so in this paper, the qualitative characteristics are converted into quantitative, which are then ranked. This approach allows us to analyze the content of corporate websites, such as industry and highlight the top of the best of them. In the examples discussed Sites coal, energy and mining and metallurgical complex of Ukraine.

Analysis of recent research. Usually site parameters chosen for reasons of simplicity of their location directly on the site. From these positions often isolated such parameters of sites:

- language of presentation;
- ability to register on the site for additional materials;
- receive complete information about the company products;
- methods of communication links with the company;
- possibility of online ordering and paying for goods online;
- the company's presence in social networks.

We can recognize that these indicators easy to determine and they approximately characterize the site, but not well enough. Not take into account the technical level of the site and its commercial effectiveness, it is difficult to identify the shortcomings of the site and its benefits are not available on site elements necessary for good business.

In this paper we present other indicators of sites that, in our opinion, are of considerable interest for market research.

Ranking of sites is usually done in terms of attendance, the classification features of sites are not counted or counted only in the thematic areas. The most commonly used indicators such as Alexa – rating, Google – metric, Yandex – metric statistics counters visits Hotlog, Mail.ru, LiveInternet, hit.ua and other.

Selection of the unsolved problems of the common. Statistics of the number of visits, of course, is very important and is taken into account by search engines, but for corporate sites is important, not just traffic, targeted traffic and potential customers who come to the site with the intention to make a deal, and search robot can not identify them.

Formulation of goals. In this paper proposes methods of classification and ranking of sites of industrial enterprises, which take into account the specific characteristics of marketing sites, determining the level of presented content, particularly e-business, and is characterized by its commercial viability. Indicators for such classification and ranking offered quite a lot and they are mostly qualitative in nature, so in this paper, the qualitative characteristics are converted into quantitative, which are then ranked. This approach allows us to analyze the content of corporate websites, such as industry and highlight the top of the best of them. In the examples discussed Sites coal energy and mining and metallurgical complexes Ukraine.

The main material. In this paper we consider the corporate web sites of greatest interest to the scale of business. They should be divided into a number of classification groups and certain number of subgroups in each group. Thus, a two-tier system of local multicriteria performance site, which is quite easily converted to one global performance indicators by which it is possible to rank sites.

To make the system of classification and ranking the most simple but at the same time sufficiently complete and accurate by functional characteristics, special attention should be paid to the proper selection of local groups and subgroups of performance criteria.

This can be done by selecting criteria in groups and subgroups based on the following assumptions made: to allocate a total of 32 (quite a lot of) local criterion of efficiency of sites, the number of criteria groups to adopt to 8, the number of sub-criteria in each group taken as equal to 4, all groups and subgroups in each group considered equal in importance and effectiveness.

When the assumptions selected local performance criteria corporate sites will be as follows (groups are numbered, and subgroups in groups of - letters) [1]:

1. Management and business development in corporation:

- a) positioning of the company, brand, material and information products on the Internet;
- b) providing information about the company and its business, maintain relations with business partners and shareholders.
- c) Publication partners reviews about products and services.
- d) Publication of the proposed nomenclature for selecting products and services.

2. Marketing Information:

- a) providing primary marketing information about the company, its logo, products, services, solutions, and customers;
- b) provide information for electronic and print media through blog articles, podcasts, and videocasts RSS-feeds;
- c) availability postal and PC mailings, on which customers can subscribe to the site, the presence of the customer base, the affiliate program;
- d) promoting corporate websites using SEO, mailings, banner and contextual advertising, participation in forums, social networks and virtual communities, blogging desired thematic focus, etc.

3. Sales of goods, products and services on the Internet:

- a) direct sales through e-shops and e-catalogs;
- b) making applications using web forms and / or online shopping;
- c) sales of goods and services via Internet telephony;
- d) measures to expand domestic and international customer base and markets.

4. Electronic consumers support:

- a) establishing contacts with consumers and making the client database, compiling electronic data cards about partner-corporations;

- b) preparation and processing of potential deals (Lead), reporting of the “sales funnel”, fixing deals, event tracking;
- c) group and individual sending letters and telephone messages at various stages of order processing;
- d) consulting, training, answers to questions and other forms of online customer support.

5. *Analysis of consumer preferences:*

- a) getting opinions, reviews and comments on the products and shortcomings of their sales, managers consultations and answers to questions and users application;
- b) conduct customer surveys and questionnaires, contests and campaigns;
- c) the study of the behavior of consumers, their tastes and preferences;
- d) enabling customers to leave in comments active links to their sites.

6. *On-line management of staff:*

- a) forming and supporting a positive corporate image in the labor market;
- b) search candidates for vacant positions and the organization of competitions and tests in accepting new employees to hire;
- c) formation of virtual communities of former employees, loyal customers, etc.;
- d) publication the proposals of online job on the site and social networks.

7. *On-line financial management:*

- a) the use of electronic payment systems for Internet payments for goods and services;
- b) using banking information systems to track cash and non-cash transfers;
- c) delivery of goods and receiving payment through postal services;
- d) automates processing of transactions, reducing cycle and increase sales and revenue, advertising on the site in order to reduce fixed and variable costs.

8. *Infrastructure and business process management:*

- a) getting information directly from clients to create new products for different social groups;
- b) organization of “virtual office”, integrated with mobile communications;
- c) minimizing paperwork (paperless office) by storing documents in electronic form, including on the “external” towards the company sites;
- d) expanding the range of problems to be solved through the mechanisms of direct customer service via extranet (providing customers of the company with the “closed” information, commit hidden transactions, decision support, creating a system of settlements, etc.).

Even with this rather complex division (although the number of criteria can easily be increased), for any given study site, can not be attributed to any one classification group. However, this need not do. When the functional features are known, the quality of the corporate site in terms of its functionality will be defined as the types and number of classifications.

For example, let site A1 has the following features for each group and subgroup: *1abcd, 2abcd, 3abcd, 4abcd, 5adcd, 6abcd, 7abcd, 8abcd*. On the proposed classification given corporate site has a complete set of functional fea-

tures. If we now take a competitor's site A2, we can always determine what features it has no signs of, such as group *1a, 4abcd, 5abc, 6abc, 7a, 8abcd*, that would be appropriate to make the further improvement and development of the site.

Learn a lot about the site you can, for example, use a content management system (CMS), on the site <http://2ip.ru>, or on the site <http://1whois.ru> etc. You can use the autonomous programs such as SiteAuditor. For example, if site A1 is up and running on the CMS IC – Bitrix, and site A2 – on CMS Joomla, then knowing the functionality of these popular CMS you can say with reasonable certainty about the inability to implement, for example, the full set of electronic customer support or, for example, business management processes and finances through internal extranet portals.

The assumptions made all the proposed 32 local criterion of efficiency of corporate websites for ease of calculations it is useful to take the same and equal to $1/32 = 0.03125$, if present in the functional site, and equal to 0, in the absence thereof. In this case, the method can be used additive convolution (simple summation of individual criteria) when calculating global performance criteria sites, which greatly simplifies the task of ranking. Global additive criterion is determined by the sum of all 32 local criteria. For more accurate analysis, you can use a weighted sum of the local criteria.

Accounting for all the proposed options in this article sites will be enough to fully characterize the rating of functional characteristics of the sites that will do a complete analysis of corporations representation on the Internet and to quantify identify their competitive advantages and disadvantages.

Formalized methodology for ranking sites on global additive criterion. For the public to trust the rating must have a mathematically rigorous and clear methodology for ranking, without reference to authoritative sources and expert opinions. Then it is possible to self control rating by the site owners, and its validation can be performed by any entity at any given time. Failure to do so will always remain doubt in its authenticity.

In this paper we propose a simple method for ranking sites, taking into account the same relative importance of local performance criteria, and which can be used, for example, to rank sites branches of Ukraine.

One part of the local criteria present in the functional site, with numbers *i*, belonging to the set of indices Ω_1 should be taken equal $1/n$ (where $n=32$ – the total amount received for the consideration of local performance criteria sites; *j* – serial number of the site),

$$f_{ij} = 1/n, i \in \Omega_1.$$

Another part of the local criteria, absent in the functional site, with numbers *i*, belonging to the set of indices Ω_2 should be taken as zero,

$$f_{ij} = 0, i \in \Omega_2.$$

Set of indices Ω contains sets of indices Ω_1 and Ω_2 ,

$$\Omega = \Omega_1 \cap \Omega_2 = \{1,2,3...n\}.$$

The assumptions made global criterion effectiveness of the site S_j determined by the sum of local criteria f_{ij}

$$S_j = \sum_{i=1}^n f_{ij}. \quad (1)$$

Next, calculate the global performance criteria for each site under consideration $S_j < I$, then perform their ranking by index j and descending a global criterion of efficiency.

Example 1. Determine the top 5 of the best sites of the coal and energy industry. To solve this problem was ana-

lyzed content on all sites of the coal and energy industry. Information about the sites and companies was taken in the coal portal of Ukraine <http://ukrcoal.com/>.

The home page contains the catalog of all the companies involved in the coal industry. Total in Ukraine of 347. By region: Donetsk – 159 enterprises, Luhans'k – 120, L'viv – 23, Dnepropetrovs'k – 19, etc. A total of 12 areas.

In the category "Other" is given another 254 enterprises, of which: plants producing mining equipment – 149, trade – 44, sales/delivery – 34, loading/transport – 14, holdings – 8, coal mining – 3, concentrators – 2. All categories of enterprises are presented in the form of hyperlinks to the appropriate page. Results of research on the content of the five largest companies are presented in table 1.

Table 1

Top 5 of the best sites of coal and energy industry of Ukraine, defined of the proposed method

Criteria code	Criteria/site number	www.dtek.com	resurskompani.com	donugol.ru	donuglesnab.com.ua	usp-company.com.ua
1-a	1	0.03125	0.03125	0.03125	0.03125	0.03125
1-b	2	0.03125	0.03125	0.03125	0.03125	0.03125
1-c	3	0	0	0	0	0
1-d	4	0.03125	0.03125	0.03125	0.03125	0.03125
2-a	5	0.03125	0.03125	0.03125	0.03125	0.03125
2-b	6	0.03125	0	0	0.03125	0
2-c	7	0.03125	0	0	0	0
2-d	8	0.03125	0	0	0	0
3-a	9	0	0.03125	0	0	0
3-b	10	0	0.03125	0	0	0
3-c	11	0	0	0	0	0
3-d	12	0.03125	0.03125	0	0	0
4-a	13	0	0	0.03125	0	0
4-b	14	0	0	0	0	0
4-c	15	0	0	0	0	0
4-d	16	0.03125	0.03125	0.03125	0	0
5-a	17	0	0	0.03125	0	0
5-b	18	0	0	0	0	0
5-c	19	0.03125	0	0	0	0
5-d	20	0	0	0.03125	0	0
6-a	21	0.03125	0.03125	0.03125	0	0
6-b	22	0	0	0.03125	0	0
6-c	23	0	0	0	0	0
6-d	24	0	0	0	0	0
7-a	25	0	0	0	0	0
7-b	26	0	0	0	0	0
7-c	27	0	0	0	0	0
7-d	28	0	0.03125	0	0	0
8-a	29	0	0	0.03125	0	0
8-b	30	0	0	0	0	0
8-c	31	0	0	0	0	0
8-d	32	0.03125	0	0	0	0
Global criteria		0.375	0.3125	0.34375	0.15625	0.125
Number in rating		1	3	2	4	5

Example 2. Determine the top 5 of the best sites of mining and metallurgical complex of Ukraine. To solve this problem was analyzed content on all sites of the coal and energy industry. Information about the sites

and companies was taken on portals of Ukraine <http://ukrrudprom.com> и <http://www.ua-region.info/>. Results of the content study are presented for 5 largest companies in table 2.

Table 2

Top 5 of the best sites of mining and metallurgical complex of Ukraine, defined of the proposed method

Criteria code	Criteria/site number	metinvestholding.com/ru	ugok.info	arcelormittal.com.ua	titanexport.com	dmkd.dp.ua
1-a	1	0.03125	0.03125	0.03125	0.03125	0.03125
1-b	2	0.03125	0.03125	0.03125	0.03125	0.03125
1-c	3	0	0	0	0	0
1-d	4	0.03125	0.03125	0.03125	0.03125	0.03125
2-a	5	0.03125	0.03125	0.03125	0.03125	0.03125
2-b	6	0.03125	0.03125	0.03125	0.03125	0.03125
2-c	7	0.03125	0	0	0.03125	0
2-d	8	0.03125	0	0.03125	0.03125	0
3-a	9	0.03125	0	0.03125	0.03125	0
3-b	10	0.03125	0	0	0.03125	0
3-c	11	0	0	0	0	0
3-d	12	0.03125	0	0.03125	0.03125	0
4-a	13	0.03125	0	0.03125	0.03125	0
4-b	14	0	0	0	0	0
4-c	15	0	0	0	0	0
4-d	16	0.03125	0	0.03125	0.03125	0.03125
5-a	17	0.03125	0	0.03125	0.03125	0
5-b	18	0	0	0	0	0
5-c	19	0.03125	0	0	0	0
5-d	20	0	0	0	0	0
6-a	21	0.03125	0.03125	0.03125	0.03125	0.03125
6-b	22	0.03125	0	0.03125	0	0
6-c	23	0	0	0	0	0
6-d	24	0.03125	0	0	0.03125	0
7-a	25	0	0	0	0	0
7-b	26	0	0	0	0	0
7-c	27	0	0	0	0	0
7-d	28	0.03125	0.03125	0	0.03125	0
8-a	29	0.03125	0	0.03125	0	0
8-b	30	0	0	0	0	0
8-c	31	0.03125	0.03125	0.03125	0	0
8-d	32	0.03125	0	0	0	0
Global criteria		0.65625	0.25	0.46875	0.5	0.21875
Number in rating		1	4	3	2	5

Conclusions and prospects for development. Comparative analysis of the data in tables 1 and 2 allow us to draw the following conclusions about the quality of content on the site necessary for effective e-commerce. All sites of examined companies missing the following components:

1. Publication of the comments of the partners about products and services (item 1-c). One gets the impression that this approach has become traditional for industrial sites, although the organization of comments to posts and pages are usually included in the standard configuration of any content management system, and this is not a technical difficulty. Moreover, easily organized moderated comments and request any feedback can be corrected or not published at all. Reasons for “fear” open publication reviews are unknown, but we can confidently say that it reduces the sites’ positions in the search results and reduces site traffic.

2. On sites for commercial activities no signs of use IP-telephony (item 3-a). More information about the capabilities of IP-telephony can be found on the websites <http://binotel.ua/solutions-enterprise>, <http://oktell.com.ua/koll-centr-oktell/>. Naturally, this fact does not improve business performance.

3. There are no signs noted in items 4-b, 4-c on the sites. This suggests significant shortcomings in dealing with clients, especially in conjunction with item 3-c.

4. Effective methods to attract customers, set out in items 5-b, 5-d are not used.

5. There are no links to the virtual community, organized in order to promote public discussion about activity of the enterprise (item 6-c).

6. Electronic payment systems for automated payment for goods using credit cards and electronic money (item 7-a) are not used, there is no information on the site about the use of banking information systems (item 7-b).

7. Postal services for delivery of goods to customers item 7-c are not used. Obviously, this is due to the lack of postal services for delivery of industrial products and it reduces demand, sales and profitability of enterprises. It is necessary to organize such postal services.

8. Virtual offices (8-b) and mechanisms of direct customer service via extranet (8-d) are not used. Sites to be ordered in studios and developers are not put the above objectives, and, meanwhile, they are easy to implement, such as CMS IS-Bitrix.

9. There is even more unsolved problems on the sites of the coal and energy sector (items 6-d, 8-d, 8-c etc.), and this applies even to the largest enterprises such as DTEK. Most small holdings has significantly more gaps in the functionality of sites that are simple sites-business cards, on which are completely absent elements of e-commerce that does not improve the efficiency of enterprises.

10. The proposed in article simple and affordable method of classifying sites enables an objective assessment of the effectiveness of the proposed sites for a local e-commerce performance criteria, and mathematically rigorous methodology for ranking sites by additive criterion is characterized by its simplicity and can be recommended for production workers.

11. Accuracy of ranking can be increased by using the method of weighted sum of local criteria, which, however, will greatly complicate the calculations, and little to add to the above conclusions.

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Мета. Створення методів класифікації та ранжирування комерційних сайтів промислових підприємств, які враховують конкретні маркетингові характеристики сайтів, що визначають рівень представленого контенту, особливості ведення електронного бізнесу та характеризують його комерційну ефективність.

Методика. Запропонована система локальних критеріїв ефективності комерційних сайтів і формалізоване їх приведення до цифрової форми. Розраховані значення глобальних критеріїв сайтів вугільно-енергетичного та гірничо-металургійного комплексів, виконане їх ранжирування.

Результати. Складена система класифікації та ранжирування комерційних сайтів промислових підприємств, наведені приклади її використання для вугільно-енергетичних і гірничо-металургійних підприємств.

Наукова новизна. Уперше запропонована методика класифікації комерційних сайтів промислових підприємств, що враховує велику кількість локальних критеріїв ефективності, виконана їх згортка до одного глобального критерію, за яким виконується їх ранжирування.

Практична значимість. Запропонована методика класифікації й ранжирування сайтів промислових підприємств дозволяє виявляти їх недоліки та підвищувати ефективність ведення електронної комерції.

Ключові слова: електронна комерція, корпоративні сайти, класифікація, ранжирування

Цель. Создание методов классификации и ранжирования коммерческих сайтов промышленных предприятий, которые учитывают конкретные маркетинговые характеристики сайтов, определяющие уровень представленного контента, особенности ведения электронного бизнеса и характеризуют его коммерческую эффективность.

Методика. Предложена система локальных критериев эффективности коммерческих сайтов и формализовано их приведение к цифровой форме. Рассчитаны значения глобальных критериев сайтов угольно-энергетического и горно-металлургического комплексов, выполнено их ранжирование.

Результаты. Составлена система классификации и ранжирования коммерческих сайтов промышленных предприятий, приведены примеры ее использования для угольно-энергетических и горно-металлургических предприятий.

Научная новизна. Впервые предложена методика классификации коммерческих сайтов промышленных предприятий, учитывающая большое количество локальных критериев эффективности, выполнена их свертка к одному глобальному критерию, по которому выполняется их ранжирование.

Практическая значимость. Предложена методика классификации и ранжирования сайтов промышленных предприятий, позволяющая выявлять их недостатки и повышать эффективность ведения электронной коммерции.

Ключевые слова: электронная коммерция, корпоративные сайты, классификация, ранжирование

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