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Using of New Information Technology in the Creating of Promotion Products

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ABSTRACT

Advertising is the engine of commerce. This term has been known for a long time. Especially it is relevant in our days, when every day in the world there are millions of firms and enterprise fight for consumers of their goods. Present a product, make it more attractive to the consumer, persuade to choose it from thousands of similar – here is the main function of advertising.

But creating of high quality and effective advertising is connected with a number of difficulties. Among the major – advertising should influence the reception of the person surrounding reality, manage his behavior. Anyway, when creating advertising, it is necessary to process and analyze large volumes of sociological information to simplify these processes, it is advisable to use new information approaches. In this paper was solved the Problem controlling the behavior of groups of people and individual with the management are engaged in such a scientific direction behest, orientation towards the development of formal mathematical models and method of managing people's behavior.

Naturally the result of the program there will be no equivalence of research, conducted by the team of markets, sociologists, but they will be acceptable, while the cost and time of research will be in several of orders below.

Keywords: Advertising, Enterprise, Analyze, Method, Mechanism of Controlling.

JEL Classification: M32, O32, O31

1.INTRODUCTION

As is well known, the world has witnessed a major revolution in the field of technology and has resulted in a high revolution in the flow of information so that the spread of information is becoming very high.

And the largest and least effort and cost and reach the recipient easily and from this flow "production of propaganda means".

Which technology has greatly contributed to its evolution over the years the propaganda programs becomes are different and difference from the past so that the user can shop electronically at home through the application of certain products on the Internet and also can promote well to destinations and hotels accompanied by the most important details, photos and videos, Which documents the credibility of the propaganda and also the promotion of food and medical products and many of them.
An example of its development in 1960 was the printing of a poster from the Soviet Union on Middle Eastern wars. Among the exhibits is a medical poster and publications for the treatment of germs.

This is evidence of the development of advertising means from posters to technology reaches every home and all members of the family, the importance of publicity and advertising stems from many definitions:

A group of activities that aim to communicate and communication orally or visually to a target group of individuals in order to inform them and influence them to purchase a product or service for a free paid to a specific advertising agency.

And also from its definitions "is the means paid to create a state of psychological satisfaction in the masses for the purpose of selling or assisting in the sale of a good or service.

With the spread of the Internet has increased the importance of advertising, especially over the Internet, there are many options for the consumer to access and get the product at anytime and anywhere, And reduction of administrative costs, which is reflected in the form of a decline in the price of the commodity itself, in addition to the rapid exchange of information and the ability of the consumer to inquire and ask in detail about the commodity.

It is studies conducted in the United States of America

On the promotion of goods through the Internet contributed 30% of GDP during the period from 1995 to 1998 as reported by the US Department of Commerce.
One of the objectives of the use of information technology in the production of advertising means:

1--Translating ideas into sophisticated art projects by integrating artistic and creative skills with multimedia applications and technologies.

2--Exploitation of technical and artificial skills in the production and development of promotional means.

3--Producing and directing documentaries and advertisements.

4--Use of specialized programs in graphic design for the design of printed and packaging boxes.

5--Use specialized software in editing and processing audio.

6--Use specialized tools and software in video processing.

7--Design of CDs and presentations interactive and non-interactive.

--Use tools and software specialized in 3D design. 10

(Use the tools and programs that is Ability to design websites9.--

11-- Ability to digitally edit the video, produce documentary films, and different kind of films.

12 --Ability to design and process images using two- and three-dimensional programs.

13--Ability to use multimedia applications and work on similar application programs.

14--The ability to store, retrieve and protect information in all its forms.

15--The ability to self-expressive in a particular product.

16--The ability to solve design challenges with high efficiency.

17--the skill of communicate and communication with different groups and bear the pressures of work.

18--Design effects and editing in satellite channels.

19--Design of TV commercials.
20--Working in radio stations.

21--Ability to design publications from advertisements, magazines, newspapers and others [Brian David Goff. 2009; Khaled Batiha, Safwan Al Salaimeh. 2016; Mohammad Bani Younes , Safwan Al Salaimeh, 2015].

2. THE PROBLEM AND SOLUTION

Problem controlling the behavior of groups of people and individual with the management are engaged in such a scientific direction behest, orientation towards the development of formal mathematical models and method of managing people's behavior.

In this case, to develop a mathematical apparatus for behavior, the following abstract model of human behavior [Brian David Goff. 2009; Khaled Batiha, Safwan Al Salaimeh. 2016]

$$Q \to I_S \to P_n$$

Where Q- environment; I_S – individual information portrait of the environment;

$I_S = \emptyset(Q)$; P_n – decision of an individual; $P_n = \emptyset(I_S)$.

Analysis of this model shows, that is possible of this control action, which affect the behavior of individuals:

1. Managing the characteristics of the actual decision – making situation. There may be following effects; material and moral;

2. Managing the process of information display I_S of reality in the individual information portrait. This is what advertising is all about.

Then the synthesis of any control is considered as a combination of the following steps:

- Formulation of simulation models of the object;
- Definition of the objective function;
- Allocation of control actions;
- Determination of the strategy for changing control actions, providing the most detective achievement of the goal, i,e the max or min of the objective function.

Mathematical is written in the first three stages. The fourth stage for whose sake actually and realized the first three stages, mathematical is described only for the control action, associated with the changing characteristics of the environment Q

managing the process of information mapping of the reality and individual information portraits of the individual interested in us, remain without a mathematical description and implies the use of people, experts of advertising, which is based on statically of market segments, already on the basis of their own experience and intuition offer a specific of control[Mohammad Bani Younes, Safwan Al Salaimeh, 2015; Ni Wang, Jye-Chyi Lu and Paul Kvam, 2011; Stefan Bayarov, 2010].

Since there is no mathematical solution to this problem then it, following Noil and Simon, can be attributed to un formalized tasks and solve by methods of artificial intelligence.

At present, the development of a demonstrative prototype of the software "Butterfly", which will have to solve the problem of advertising phrases with this solution will be used as a mathematical tool behaviorism, so are the methods of artificial intelligence (use expert system) consider the algorithm for the synthesis of the mechanism of controlling the behavior of social groups, used in the program.

1. Information on the current information portraits of the advertising product is collected and similar products in non-homogenous social group.
   Collection of information suggests the creation of a questionnaire. The software offers to include an interface for its creation, and also be means of input the result of the survey.
2. An analysis of the information portrayed with the help of a very existing mathematical approach, highlight the most important aspects of the information portrayal. At this stage, the simulation model of the object is synthesized. In behaviorism the most convent and adequate with the computational point of view of the utility models is an alternative additive utility function is the following:

$$P(x) = \sum_{i=1}^{n} a_i k_1^n(x)$$

a_i – dimensionless coefficient; taking into account the relative importance of the characteristics of the alternative

$$0 \le a_i \le 1; \quad \sum_{i=1}^{n} a_i = 1, \qquad \forall_i = 1, n;$$

$k_1^n -$ normalized characteristics, i.e heterogeneous characteristics, translated at least one dimension or dimensionless mind

$$k_i^n(x) = \left(\frac{k_i(x) - k_{ik}}{k_{i_{aux}}}\right)^{\propto_i} ;$$

$k_i(x)$ – actual absolute values i[th] characteristics of alternative x;

K_{inx}, k_{inl} – the best or the worst value i[th] characteristics on a variety of alternatives on which the choice is made.

$\propto_i$- Nonlinearity parameter, determining the nonlinearity of the dependence of utility value on criterion value [Safwan Al Salaimeh, Khaled Batiha, 2006; Safwan Al Salaimeh, Amer Abu Zaher, 2011. Safwan Al Salaimeh, Pushkarev A.N., 2011]

After the structural identification on the parameters of the models are determined; coefficient value a_i and nonlinearity parameter α_i. at the same time objective approaches to assess the individuals references based on the result of fixed act of choosing an alternative choosing an S[th] alternative means, that its utility is superior to the utility of any other alternative

$$p(x_s) > p(x_i), \quad i = 1, n;$$

$$p(x_s) > p(x_v);$$

$$p(x_s) = a_i k_{s_i}^n + a_2 k_{s_2}^n + \cdots + a_n k_{s_n}^n > a_1 k_{v1}^n + a_2 k_{v2}^n + \cdots + a_n k_{vn}^n = p(x_v);$$

$$\begin{cases} a_1(k_{v1}^n - a_2 k_{s2}^n) + a_2(k_{v2}^n - k_{s2}^n) + \cdots + a_n(k_{vn}^n - k_{sm}^n) < 0 \\ \vdots \\ m - 1 \end{cases}$$

$$(k_{v1}^n - k_{s1}^n) = b_{v2}^1; \; and \; so \; on;$$

Then the identification model can be represented in the following form;

$$\sum_{i=1}^n a_i b_i < 0; \quad j = 1, m;$$

$$\sum_{i=1}^n a_i b_{ij} = 0, \; i = 1, L;$$

$$0 \le a_i \le 1; \; \sum_{i=1}^n a_i = 1; \; \forall i = 1, n;$$

To determine the point estimate i.e specific numerical values of the coefficient a_i, the approach based on definition of a chypyshal point, it is called chypychal approximate point and corresponds to the solution which in the great degree satisfies the given organ:

$x = argmax_{x \in \Omega} L;$ where L – distance from any point x to constraint line; Ω – the range of possible values of the coefficient a_i [Safwan Al Salaimeh, Zafer Makadmeh, Avramenko V.P. Shtangee S.V., 2012; Safwan Al Salaimeh, Mohammad Bani Younes, 2014; Safwan al Salaimeh, Zeyad Al Saraireh, Jawad Hammad Al Rawashdeh, 2015]

As the all relation, which are included in the model are linear, the problem of determine a chipyyshal point is a linear programming and solved by standard algorithm.

After obtaining the numerical value of the weight coefficient a_i , it is possible by their appointment to see which of the characteristics of the alternative are more influential to the usefulness of the alternative;

3. Using one part of the expert system for the transportation of result mathematical analysis and polls are frequent, relating to the psychological analysis of the individual information portraiture in certain image.

4. Obtaining with the help of another part expert systems on the received image of several promotional phrases, allowing with good probability to coefficient advertise the original product.

5. Analysis and modification of the result. Based on the above, using the software, the basis for the realization of which is the theory of behaviorism and methods of artificial intelligence, allows receiving the advertising directly without referring to advertising agencies. And does that mean, the software a use the middle and small companies, not having the required capitals for carrying out serious socialical researches, advertising company.

3.Result

Finally, as we see, in this paper was solved the Problem controlling the behavior of groups of people and individual with the management are engaged in such a scientific direction behest, orientation towards the development of formal mathematical models and method of managing people's behavior.

Naturally the result of the program there will be no equivalence of research, conducted by the team of markets, sociologists, but they will be acceptable, while the cost and time of research will be in several of orders below.

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