

The more complex and longer is the algorithm, the more secure it is, but it is very resource-intensive.

There are two classes of encryption algorithms.

1. Symmetric algorithms. These algorithms use the same pre-shared key, sometimes called a pair of secret keys, to encrypt and decrypt data. Both the sender and the recipient know the pre-shared key before any encrypted message begins. Encryption algorithms that use a common key are simpler and require less processing power.

2. Asymmetric algorithms. Asymmetrical encryption algorithms use one key to encrypt data and a different key to decrypt data. One key is public and the other is private. Anyone who has a public key can encrypt a message using the public key of the receiver, and the receiver is the only one that can decrypt it using its private key. Asymmetric algorithms are more complex.

Data currently in use is a growing problem for many organizations. In its processing the data is not protected since the user needs to open and modify data. The system memory stores data that can contain sensitive data, such as an encryption key. If criminals compromise the data used, they will have access to data at rest and data in motion. That is one of the matter to which a user should pay attention to, but in general it is very helpful and convenient in operation.

*Scientific supervisor: Balatska N.I.,
PhD, Senior Lecturer*

UDC 11372635 (043.2)

Ryabchun D.V.

National Aviation University, Kyiv

THE CONCEPTION OF MARKETING MIX

The aim of marketing is to make marketing efforts unnecessary. Its goal is to know and understand the customer's needs, so well that the goods or services will be exactly what the customer wants and will buy. In the defining the needs and wishes of customers, managers are using the marketing mix.

The marketing mix is a foundation model in marketing that is grounded on four main factors of marketing decision: the product, the price, the promotion, and the place (Tab. 1). The marketing mix has been determined as the set of marketing tools that the enterprise uses to pursue its marketing objectives in the target. Also, it has another name as 4Ps.



Tab.1 The marketing mix

The model is simple and universal in use. It is a kind of check-list for the effective development of the company's product on the market. Because of its simplicity, it can be used by anyone – even a person who is not a specialist in marketing. So, I am going to explain you the simplicity of marketing mix.

It is believed that the model of marketing mix includes all the necessary parameters that a marketer can monitor and develop for effective promotion of the product on the market. The purpose of the marketing complex is to develop a strategy that will increase the comparable value of the goods and also helps to maximize the company's long-term profit in the market.

Firstly, we will explain the term “product”. The product is what the firm offers to the market and the consumer. The product can be either a good or a service. It is the first thing with which work is began on marketing mix. A successful product is always built on understanding and meeting the important needs of the target market.

The second one is a price. I think the price is an important element of the marketing mix. It is responsible for the final profit from the sale of the goods. The price is determined on the basis of the perceived value of the goods by the consumer, the cost of the product, the prices of competitors and the desired rate of profit.

Next is a place where the product will be sold. The place of sale ensures the availability of the product for the target market and means that the goods of the company must be present in the market in the right place (where the target consumer can see and buy it) at the right time (when the target consumer needs to buy it). In other words, the place of sale is the company's distribution model.

The last one is a promotion. According to the marketing mix, promotion is understood as all marketing communications, which allow attracting the consumer's attention to the goods, to form knowledge about the product and its key characteristics, to form a need for purchase of goods. Promotion includes such marketing communications as advertising, promotion in points of sales, direct marketing, PR, and others.

As competition becomes more complex in all markets, the 4Ps mix marketing model has also undergone changes and has evolved first into the 5Ps model and then into the 7Ps model. To the new model was added 3Ps: the process, the people, and the physical evidence.

The term “people” appeared in connection with the development of relationship marketing and marketing services. It means people who can influence the perception of your product in the eyes of the target market. The importance of these people is due to the fact that they can have a significant impact on the perception of your product in the eyes of the target consumer.

The term “process” describes the process of interaction between the consumer and the company. This interaction is given special attention since it is the basis for making a purchase on the market and building customer loyalty.

The term “physical evidence” describes what surrounds the consumer at the time of the purchase of the service. The physical environment allows a consumer to form the right image of the company, to highlight the distinctive characteristics of the product.

The 4Ps model of the marketing mix is usually used, but each enterprise uses what is better for it. Initially, the marketing mix included only 4 basic elements: the product, the price, the place of sale and the promotion of the goods. The "product" element answers the question "What is necessary for the market or the target audience?", the "price" one helps determine the cost of selling the product and assess the level of profitability of sales, the

"place of sale" helps to build the correct distribution model (or delivery of the goods to the end user), and the last one "promotion" answers the question "How will the information about the company's product spread in the market?".

*Scientific supervisor: Kodola R.M.,
Lecturer*

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Sadovska I.I.
National Aviation University, Kyiv

VIRTUAL AND AUGMENTED REALITY: CHALLENGES AND PERSPECTIVES

The technologies that create the effect of presence give consumers the ability to combine the physical and digital world, and create an effect of reality. Due to the fast development of innovations, such devices have already appeared in work spaces and are used in many industries, such as: construction and design, automotive industry, manufacturing, logistics, and of course facility management.

Nowadays the technology with the effect of presence are distinguished into the augmented reality (AR) and the virtual reality (VR). But while AR and VR have a lot in common, they could also lead us in totally different paths in entertainment, gaming, communication and more. The difference is that in a virtual reality, the picture is created from scratch and does not encounter real objects, and the augmented reality adds a picture to the space that already exist and things in it.

Let's consider more instances, which are associated with AR. Today, there are plenty of software products for business and entertainment, which are based on these technologies. In 2014, the global market for AR amounted to 1.72 billion dollars, but the technology becomes so popular that analysts predict that by 2020 this figure will reach \$ 56.8 billion. One of the most important benefits of augmented reality is the absence of the need to buy additional equipment or headsets. The programs can be installed on any modern tablet, smartphone and computer. This technology is widely used in business and organization of work processes. Often, the added reality is used to record and reproduce the steps by step plans in task performance. It perfectly illustrates the process from start to finish, which allows you to analyze all stages of work very quickly and effectively. In addition, it is a powerful communications tool that allows users from different places to see the same 3D image and communicate with each other in the real time.

Speaking about VR, I can not help saying, that there are more than 40 millions of different VR technology devices and the market for it will reach 30 billion dollars by 2020. This is lower than the augmented reality forecasts. The main reason why are: the need of an extra set of special eyepieces, joysticks and physical sensors, gloves that remain quite expensive.

The main advantage of this technology is the full immersion in the created reality, with the ability to feel and analyze all the advantages and disadvantages of planned actions and simulate the options for the events development. There is also one major drawback – this is a possible disorientation, as technology directly affects the