

through magnetic pole of Earth. Since neutrons are unstable part of them breaks up in areas which inaccessible for charged particles with small energies. Neutrons albedo provides radiation belt with protons energy of which reach 10 in third power MeV and electrons which reach several MeV. Sun space rays it is energetic charged particles – electrons, protons and cores, which are injected by sun into interplanetary space. Particles of sun space rays appear due to solar flash. How we can register such space rays? More often scientists used Geiger counter or nuclear photographic emulsions. So my next question is: Have ever happened with you that your device like computer or phone had lags, but in few minutes lag disappear and device work as before. I want to inform you that space ray flow through your device and this lag called “single event error”, all devices which have electronic microchip are injurious to space rays. The main reason why exist this lag, because of space rays are ionized rays and has free charge. This free charge formed this lag. Some scientist succeeded to install that network of routers with memory of 25GB admits one error every 17 hours or if you will be on altitude more than 10 km your computer can get one error every 5 hours. As for intensity for getting of space rays on the altitude on 9 km it is in 300 times more than on level of sea. SO what relationship between airplanes and space rays? AS all equipment on aircraft based on microchips and it is means this defenseless of airplane. In history of aircraft there was event when space rays defeats the airplane. Once it's happening with American military aircraft like C-141B when he flow through Japan sea then unexpectedly airplane has bank on the left side. As the research showed it happens thanks to space ray. Second event happens with airplane of Qantas aircompany in 2008 when inertial block was crashed and to the system was sent incorrect data, and cause aircraft fall down and all passengers who was not belting has suffered. Nowadays humans have no technologies which can resist impact of space rays. But if humanity want to colonize Mars and to master a space we must deal with influence of this rays. So I think soon scientist find way to resist this rays.

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TECHNOLOGIES OF PRODUCT PLACEMENT IN INTEGRATED MARKETING COMMUNICATION

Today in integrated marketing communications to promote goods and services technologies of hidden advertising widely used. Product placement is the conceived insertion of a brand within a movie, broadcast, computer, cable TV programs, blogs, video games, music video/DVD's, magazine, books, musicals, internet and mobile phones and etc.

Mankind are exposed to product placement in mainstream media, occasionally even without knowing it. The genesis of product placement is associated with the appearance in 1929 of an American cartoon with the character sailor Papa, who loved canned spinach. It was noted that after the appearance of this cartoon growth in consumption of canned spinach grew in the US by 30%. At present, hidden advertising is often used in

cinema, TV shows, music videos, computer games and books.

Consider the main product placement channels:

1. The film industry, in which hidden advertising (demonstration of the brand) can be visual, sound and storyline. Visual product placement means the display of a product or logo (brand of car, refreshing beverage, chocolates, etc.).

For example, in the James Bond films, you can see the brands BMW, Smirnoff, Martini, Visa, Omega, Heineken, L'Oréal and others. A total of 20 advertiser companies paid about \$ 100 million for hidden advertising in a blockbuster – a record for the history of product placement.

2. TV shows similar to the home industry variation product placement. So, in the culinary programs branded household appliances, such as Pyramida, LG, Samsung, Philips, Braun, Bosh and others are used.

3. The radio focuses on sound product placement. For example, radio "XIT FM" in the morning shows usage such brands as Jacobs, Nescafé, L'OR and many other well-known brands.

4. In press hidden advertising may appear both in texts and in illustrations. For example, in glossy magazines in the pictures of prestigious residential areas you can find a bank sign, store, fitness center, etc. Sometimes such hidden advertising may not be the subject of an agreement.

5. Books, where hidden advertising can be successfully integrated into the plot line of literary works, especially detectives and women's novels.

6. Internet with its almost limitless possibilities of product placement, includes computer games. For example, in the game "Adrenaline" by the company 1C, brands Gillette, Coca-Cola are promoted.

7. Showbiz, integrating visual, sound and storyline product placement. Hidden advertising can be presented in songs (brand name), music clips (logo demonstration or the product itself).

Product placement manipulates the consumers' opinion, can cause people's standards of behavior, consumption, lifestyle and fashion. This is due to objective psychological peculiarities of people, their tendency to copy the advertised living standards, imitation of their idols.

At present, Ukrainian advertising agencies start to use hidden advertising technologies. With the development of the internal advertising market, this trend is changing for the better. Predicting the prospect of hidden advertising, it should be noted that it will develop in line with current marketing trends – more "go" on the Internet, whose number of users in the world is steadily increasing.

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VIRTUAL REALITY: HEALS OR MAIMS

VR is gradually penetrating into the human life. Technology has already gone beyond science fiction and entered into various areas, for example, in medicine.