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The Effectiveness of using Sensor Technology and sensory marketing on Interactive advertising

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Abstract:

The creative thinking is one of the important styles of thinking, which are used by designers to express their ideas and to transmit information of an advertising message to a recipient by Achieving the success of advertising through attract attention , using technology development in display systems and digital interaction, through the usability for sensors, in receiving and sending information between the elements of the Interactive communication process " sender - receiver - medium), which should be created according to new standards related to the new technology variables and sensory marketing, which aims to Seduce the consumer using the influence of his senses to influence his feelings and behavior, when we talks about the word"senses"we mean the five senses (sight, hearing, smell, taste and touch), which consider very important factors that interact with surrounding environment .

Keywords:

The senses - Sensors – Sensory branding – Sensory Marketing – Sensory advertising – creative thinking

i. Introduction:

the announcement of the most important constituent local economy countries industries, where working on providing messages and signals sensory and non-sensory serve as a catalyst for the response to the receiver of the message Ad factor, despite the differences in advertising media and pluralism, there are factors that increase the process of attracting attention uncle by stirring the senses.

ii. The senses:

A broadly acceptable definition of a sense would be "A system that consists of a group of sensory cell types that responds to a specific physical phenomenon, and that corresponds to a particular group of regions within the brain where the signals are received and interpreted." There is no firm agreement as to the number of senses because of differing definitions of what constitutes a sense.

The senses are frequently divided into **exteroceptive** and **interoceptive**:

- **Exteroceptive senses** are senses that perceive the body's own position, motion, and state, known as proprioceptive senses. External senses include the traditional five: sight, hearing, touch, smell and

taste, as well as thermoception (temperature differences) and possibly an additional weak magnetoception (direction), Proprioceptive senses include nociception (pain), equilibrioception (balance), proprioception (a sense of the position and movement of the parts of one's own body).

- **Interoceptive** senses are senses that perceive sensations in internal organs.

1.Sight: Sight or vision (adjectival form: visual/optical) is the capability of the eye(s) to focus and detect images of visible light on photoreceptorsin the retina of each eye that generates electrical nerve impulses for varying colors, hues, and brightness. There are two types of photoreceptors: rods and cones. Rods are very sensitive to light, but do not distinguish colors. Cones distinguish colors, but are less sensitive to dim light. There is some disagreement as to whether this constitutes one, two or three senses. Neuroanatomists generally regard it as two senses, given that different receptors are responsible for the perception of color and brightness. Some argue[citation needed]that stereopsis, the perception of depth using both eyes, also constitutes a sense, but it is generally regarded as a cognitive (that is, post-sensory) function of the visual cortex of the brain where patterns and objects in images are recognized and interpreted based on previously learned information. This is called visual memory.

The inability to see is called blindness. Blindness may result from damage to the eyeball, especially to the retina, damage to the optic nerve that connects each eye to the brain, and/or from stroke (infarcts in the brain). Temporary or permanent blindness can be caused by poisons or medications.

People who are blind from degradation or damage to the visual cortex, but still have functional eyes, are actually capable of some level of vision and reaction to visual stimuli but not a conscious perception; this is known as blindsight. People with blindsight are usually not aware that they are reacting to visual sources, and instead just unconsciously adapt their behavior to the stimulus.

2.Hearing: or audition is the sense of sound perception. Hearing is all about vibration. Mechanoreceptors turn motion into electrical nerve pulses, which are located in the inner ear. Since sound is vibration, propagating through a medium such as air, the detection of these vibrations, that is the sense of the hearing, is a mechanical sense because these vibrations are mechanically conducted from the eardrum through a series of tiny bones to hair-like fibers in the inner ear, which detect mechanical motion of the fibers within a range of about 20 to 20,000 hertz,[4] with substantial

variation between individuals. Hearing at high frequencies declines with an increase in age. Inability to hear is called deafness or hearing impairment. Sound can also be detected as vibrations conducted through the body by tactition. Lower frequencies that can be heard are detected this way. Some deaf people are able to determine direction and location of vibrations picked up through the feet.

3. **Taste:** (or gustation) is one of the traditional five senses. It refers to the capability to detect the taste of substances such as food, certain minerals, and poisons, etc. The sense of taste is often confused with the "sense" of flavor, which is a combination of taste and smell perception. Flavor depends on odor, texture, and temperature as well as on taste. Humans receive tastes through sensory organs called taste buds, or gustatory calyculi, concentrated on the upper surface of the tongue. There are five basic tastes: sweet, bitter, sour, salty and umami. Other tastes such as calcium and free fatty acids may also be basic tastes but have yet to receive widespread acceptance.

4. **Smell:** or olfaction is the other "chemical" sense. Unlike taste, there are hundreds of olfactory receptors, each binding to a particular molecular feature. Odor molecules possess a variety of features and, thus, excite specific receptors more or less strongly. This combination of excitatory signals from different receptors makes up what we perceive as the molecule's smell. In the brain, olfaction is processed by the olfactory system. Olfactory receptor neurons in the nose differ from most other neurons in that they die and regenerate on a regular basis.

5. **Touch:** or somatosensation, also called tactition or mechanoreception, is a perception resulting from activation of neural receptors, generally in the skin including hair follicles, but also in the tongue, throat, and mucosa. A variety of pressure receptors respond to variations in pressure (firm, brushing, sustained, etc.).

Comparing these senses with sensors to receive external stimuli related to the target audience and around the variables, then processed by the computer to re-sent to the display device and the interaction that directed the to recipient be communicating with the senses occurs process of attracting attention and awareness of advertising messages to produces a specific responded behavior compatible do with him, In order to clarify this relationship during figure (1) that follows:
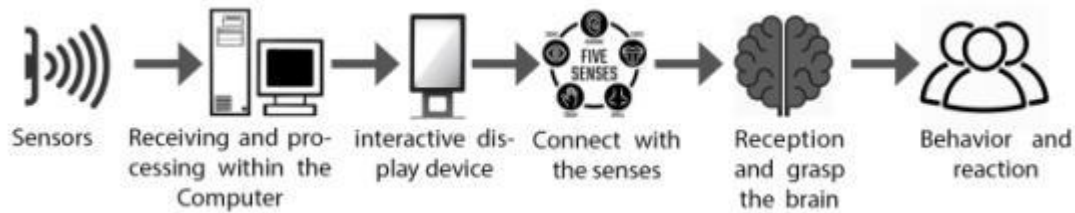
Figure (1)

iii. Sensors

Sensors are hardware components, which provide to computer the inputs regardless to the sensor type and information aboutsurrounding environment "locations". Programs can access on the computer information through sensors and stored or used to assist in the implementation of daily tasks or to improve the usability of human interactivitywithdifferent types of computerdevices.

There are two types of sensors:

- Sensors embedded in the computer
- The Sensors connected to the computer contacting wired or wireless

Some examples of sensors include sensors location device, such as a GPS receiver that can detect the current computer location. Thus the program can use the site to provide you with information about nearby restaurants or driving directions.

Is a device that has the ability to detect and measure some physical phenomena such as pressure, light or other properties, the sensor is capable of converting these measurements into an electrical signal received by another device, and most of the current sensor devices are able to communicate with the electronic device that can record such measurements and information, and the progress of science became the sensors are an integral part of daily life, such as the phone screen or sensors on doors in markets

A. Sensing technology definition

There are many definitions of this technology;the following are the four most important of these definitions:

1. Intended sensing total operations, which allows access to information about something, without that there will be no direct contact between him and capture this information device.
2. sensing is that science, which uses the properties of electromagnetic waves reflected, emitted from terrestrial objects, from the air, or from sea water and the ocean in recognizable by their specific devices.

3. Sensing can be seen that: a group media, receivers, and receiving data processing programs, which allow an understanding of materials and phenomena by their physical properties.

4. Sensor: is the science can get reflectance and spectral behavior of data objects, which can be transformed into information through the induction treatment processes.

B. Types of Sensors

1. Acoustic, sound, vibration
2. Automotive, transportation
3. Chemical
4. Electric current, electric potential, magnetic, radio
5. Flow, fluid velocity
6. Ionizing radiation, subatomic particles
7. Navigation instruments
8. Position, angle, displacement, distance, speed, acceleration
9. Optical, light, imaging, photon
10. Pressure
11. Force, density, level
12. Thermal, heat, temperature
13. Proximity, presence

Using modern technologies in sensors to stir the senses in advertising, creative thinking can be by creating innovative ways to attract attention through the use of sensors to stir the senses of the audience can be illustrated by the term sensory marketing

iv.   sensory marketing

Sensory marketing is a type of marketing those appeals to all the senses in relation to the brand. It uses the senses to relate with customers on an emotional level. Brands can forge emotional associations in the customers' minds by appealing to their senses. A multi-sensory brand experience generates certain beliefs, feelings, thoughts and opinions to create a brand image in the consumer's mind, Viz Marketing techniques that aim to seduce the consumer by using his senses to influence his feelings and behavior.

Sensory branding is used to relate to the customer in a more personal way than mass marketing. It is a technique that does what traditional forms of advertising cannot.[4] It is used in retail design, magazines, showrooms, trade-fair booths, service centers, and corporate headquarters.[5] A multi-sensory experience occurs when the customer is appealed to by two or more senses.

the sensory marketing approach tries to fill in the deficiencies of the "traditional marketing" which is too rational. Classic marketing is based on the

idea that the customer is rational, that his behavior is broke up in defined reasoned steps, according to the offer, the competition, the answer to his needs…By contrast, sensory marketing put the experiences lived by the consumers and his feelings in the process. These experiences have sensorial, emotional, cognitive, behavioral and relational dimensions, not only functional. It aims to create the adequacy of the products with their design and their packaging, and then to valorize them in a commercial environment to make them attractive. There, the consumer is behaving according to his impulsions and emotions, more than his reason.

Marketers mostly appeal to sight and sound 99% of all brand communication focuses on sight and sound. However, in many instances, sound and smell are more effective than sight when branding a product or organization. Also, visual images are more distinctive when matched with a second sense.

The main use for sensory marketing is to appeal to the consumer's senses. It is also used to understand the emotions and experiences of the consumer when being drawn to, purchasing or using the product penetrate and dominate market share, increase profitability and to ensure initial and repeat purchases. Sensory marketing is used to create an atmosphere that encourages the customer to pay money and can be influenced by sight, noise, touch, taste and smell.

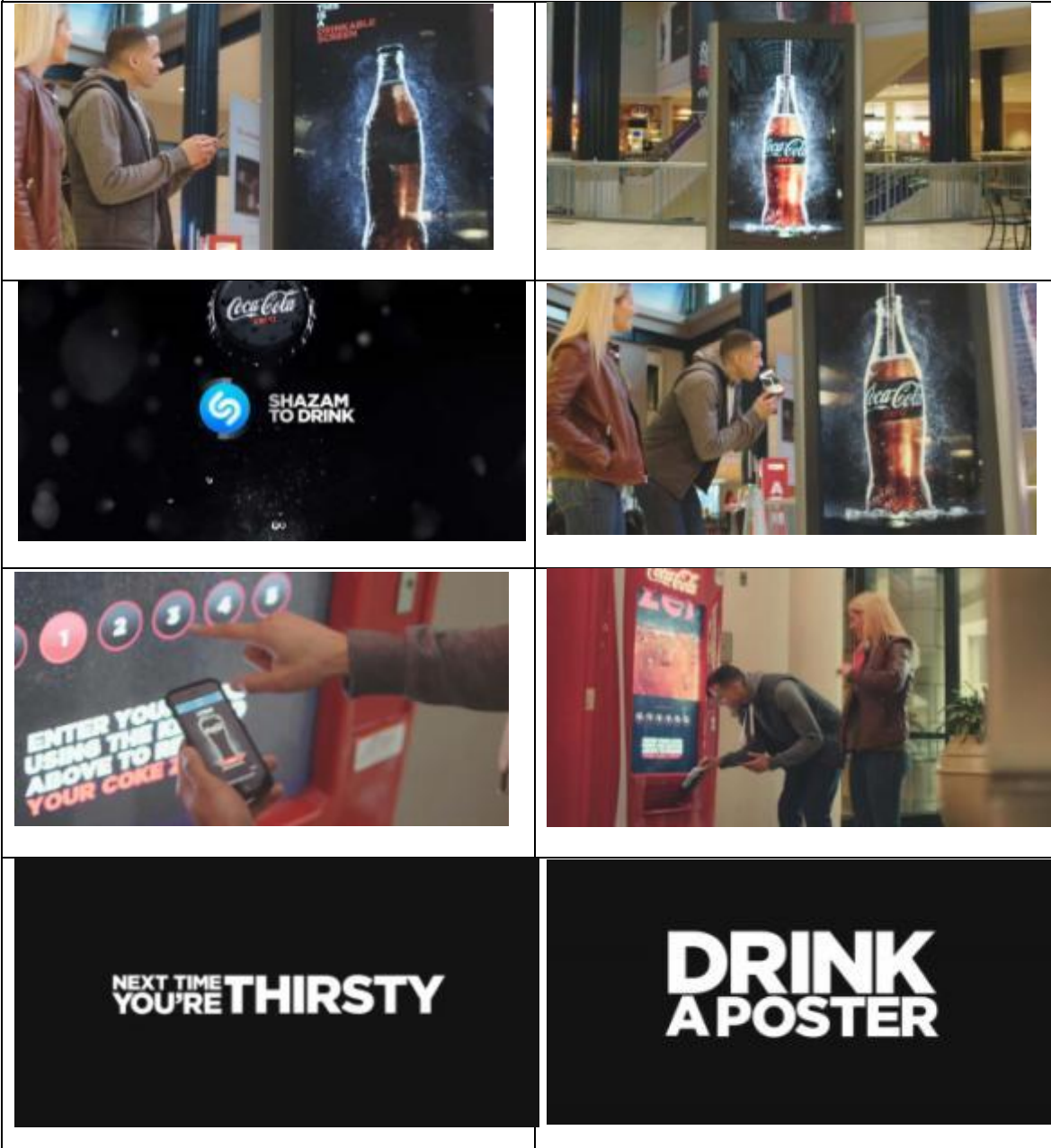Sensory marketing is defined as a way of:

- measuring and explaining consumer emotions
- spotting and capitalizing on new market opportunities
- an opportunity to maximize product profitability
- ensuring first and repeat purchase (loyalty)
- ensuring long-lasting product success

Thus we conclude that there is a strong relationship between sensory marketing and advertising built sensors and could be clarified through the following analytical study

v. Analytical study:

1. Frist Analytical Model: Coke Zero
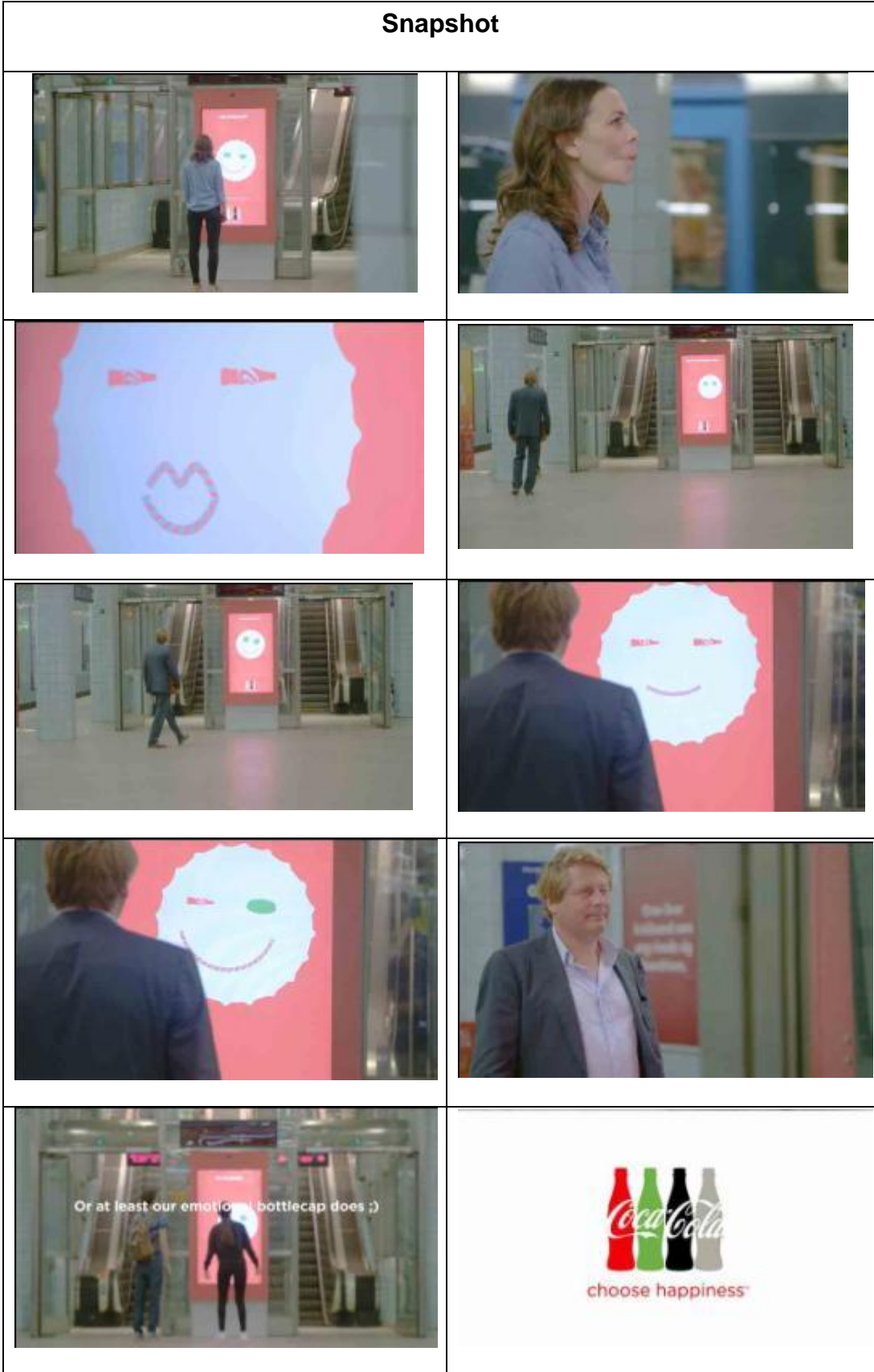
Snapshot

About Product	is a product of The Coca-Cola Company. It is a low-calorie (0.3 kcal per 100ml) variation of Coca-Cola specifically marketed to men, who were shown to associate diet drinks with women. It is marketed as having a taste that is indistinguishable from standard Coca-Cola, as opposed to Diet Coke which has a different flavor profile
About ad	Coke Zero: The Drinkable Poster - **Location:** United States - **Date:** Published on Sep 29, 2015 - **Advertising Agency:** Ogilvy, New York, USA - **Media:** Outdoor - **Production Company:** Bossa, New York - **Sound Design Company:** Sticky Audio Labs, New York - Beacon Street Studios, Venice - Junto Sounds, New York - **Photography Studio:** Method Studios / Company 3, New York - **Production Studio:** MJZ, Los Angeles – Cut +Run, New York - **President:** Adam Tucker Ogilvy New York, New York - **Chief Creative Officer:** Chris Garbutt Ogilvy New York, New York - **Chief Creative Officer:** Corinna Falusi Ogilvy New York, New York - **Agency Producer:** Tania Zorrilla Ogilvy New York, New York - **Account Supervisor:** Marissa Guerra Ogilvy New York, New York - **Art Director:** Andreas Hoff 4& Fabio Natan Ogilvy New York, New York - **Copywriter:** Carolina Saraiva Ogilvy New York, New York - **Creative Director/Art Director:** Milton Correa Ogilvy New York, New York - **Creative Director/Copywriter**: Jones Krahl Ogilvy New York, New York - **Executive Group Director:** Nicole Pinochet Ogilvy New York, New York

	- New York
ad Philosophy	In the US 80% of people have never tried Coke Zero. They think it tastes just like any diet soda. Yet 60% of people, who try it, like it. How could we get more people to taste Coke Zero?
Ad Types	competitive commercial interactive ad
Media Type	Interactive outdoor banner
Excited the senses	- Sight by visual design - Hearing by coke sound - Taste by drink coke
Sensor Type	the microphones on audience' phones
Action Sensor Technology	Using audio recognition, viewers who have downloaded and open the Shazam mobile app while the spot airs will unlock extra content.
Substances that stimulate ad	sound
Type device used in display ad	Digital Screen , smart phones , cans machine with input screen
Programs used	Shazam app Shazam
The message Ad	Next time you are thirsty , Drink a poster
The idea of advertising	We created drinkable advertising — a campaign where each ad would allow people to taste Coke Zero. Including a Drinkable Poster. In partnership with Shazam, we transformed people's phones into digital straws to drink a Coke Zero straight from the poster. Every interaction resulted in a coupon for a free Coke Zero redeemable at special vending machines.
The target audience category	All public audience

2. **Second Analytical Model:**Coca-Cola

Snapshot

About Product	Coca-Cola is a carbonated soft drink. It is produced by The Coca-Cola Company of Atlanta, Georgia, and is often referred to simply as Coke.
About ad	- The Coke-moji Happiness Experiment - **Location:** Subway station in Stockholm, Sweden - **Date:** Published on Sep, 2015 **Advertising Agency:** Isobar Sweden
ad Philosophy	Hötorget subway station in Stockholm is a great place to try out new digital fun ads, as their posters are mostly digital ones and the station itself isn't as crowded as the Central station. Here Coke decided to have some fun with posters that interact with people, if you stood in front of it and smiled, the interactive billboard would mimic your facial expression best it could. Thus making you laugh, and spreading happiness. Quite a cute idea that I'm sure entertained bored commuters as they waited for trains. Bonus, there's Coke available in the platforms vending machines too, so anyone could get a cold one if they got a hankering after playing with the billboard.
Ad Types	competitive commercial interactive ad
Media Type	Interactive outdoor banner
Excited the senses	- Sight by visual design - Motion
Sensor Type	Infrared Camera

Action Sensor Technology	Using face recognition technology, a software application that is able to determine or verify the digital image or video frame and comparing facial features
Substances that stimulate ad	Motion
Type device used in display ad	Interactive Digital Screen
Programs used	Unity Program
The message Ad	Choose Happiness
The idea of advertising	The idea of advertising replace the features pouting of features joy and happiness through the reflection of those features on the screen compact with digital camera and face recognition technology, the replacement of facial features recognizable symbols and linked to the identity of the Coca-Cola product
The target audience category	All public audience

vi. <u>Result:</u>

Through the previous points and the analytical modelsthe next conclusions are:

1. Engaging the Sensory Marketing &sensor technology in the Interactive Advertising should causing interaction and stirs the senses to achievemore reliability in the relationship between the consumer and the advertiser company about a specific product or in delivering new integrated advertising concept.
2. As a result of interaction between consumer and the interactive advertising that impact the consumer sense, new bound and concepts created in the conscious and sub conscious levels which will have big influence in decision making process in mind of consumer, and consumer behavior .
3. The sensory Advertising is the beginning of a new age ininteractive advertising which will bring new concept and ideas in life and more opportunity for designers and advertisers   to change consumer

behavior to a specific company or product or new technology concepts .

4. Expand the field of creative thinking produces the creations of new advertising ideas contribute to increased attention which will decrease consumer reaction time to the massage and influence in his decision making process and that will achieve ad profitability and thereby increase the company's profits.

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