

Comparison of Anti-Lost Equipment Features

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Abstract: Lost incidents occur frequently in society, A lot of messages about looking for lost people on the street can be seen, on the internet and in courier parcels. People are no longer satisfied with the anti-lost equipment that only has a positioning system. This article focuses on a comparison of the three main features of anti-lost devices that have been developed in the media, timeliness, interactivity, and delivery. It has been found that all three of these features are reflected in different situations, with varying degrees of intensity and effectiveness of the anti-wandering devices. This thesis facilitates academics to delve deeper into the correlation between devices and facilitates the addition of new features. In this paper, the keyword anti-lost was searched, and analyses of the anti-lost phenomenon and the development of equipment over the last five years were filtered through search engines such as Knowledge.com, and Google Scholar. And nearly 20 articles were analyzed, and three main points were summarized in the joint media characteristics.

Keywords: anti-lost equipment, feature, comparison

1. Introduction

The principle for the emergence of family tracing tape in society is because of the rapid growth of the e-commerce industry, and packing boxes are widely used to deliver goods, and love cartons are covered with love tape to seal the boxes. There are five lost children on each side, increasing the flow of information and helping in every search [1].

Family tracing tape came about due to the loss or abduction of a loved one. There is no way to determine the trail. What products are effective in reducing the probability of getting lost in our society nowadays and which developed devices are more powerful in which ways

This paper compares the different advantages of the equipment as well as the applicable population, which is conducive to helping society develop more new matching equipment, and find suitable devices from different age groups, so as to reduce the lost rate of relatives and friends.

Therefore, when it comes to the research and development of anti-lost devices, scholars can read this article and compare the functionality of the devices that have been developed and those that are to be developed in the market to give suggestions for improvement. The current market is more about product introduction, product development and analyses of the lost phenomenon. Product development reports can be useful in assisting academics to quickly determine the characteristics of a product and re-analyze the applicable population.

2. Comparisons Between Catering for Emergency Calls of All Ages

A large number of we-media platforms are the easiest place to form an information cocoon. When the fragmented information led by short videos and marketing accounts gradually occupies our lives and everyone is still cheering for the diversification of information, we do not know that such information is distracting and eroding our attention a little. The information inside the barrier is not only limited, but also fragmented and fast food. When users contact this kind of information for a long time, they will become dependent on the simple and easy to understand fragmented information, and thus they will reject and escape the non-fragmented information encountered in life, study and work. Escape psychology is a manifestation of seeking benefits and avoiding harm, and its harm lies in the fact that the avoiders themselves are easy to become addicted to it and become dependent on it. As long as they feel uncomfortable, they immediately flee the problem to find solace, and are not willing to spend time to understand and experience. Over time, they will not be interested in things in life or it is difficult to ensure concentration when doing things, and they cannot think deeply when looking at things, only staying on the surface analysis, unable to grasp the core of their essence.

A decrease in concentration can also manifest itself in a loss of time. The emergence of short video platforms also makes it easy for users to fall into and immerse in shallow happiness that is extremely easy to obtain. In the short term, the information cocoon can allow users to enjoy the pleasure of being immersed in the "ocean of interest", and the happy mood will form positive emotional feedback, so as to ensure the mental health of users. For a long time, not only will the information that users understand and access become very limited, but they will "lose themselves" in the fragmented and targeted information for a long time, forming a certain disconnect with the comprehensive social information. After disengaging from the information of interest, it is unable to respond to the information in other fields in a timely manner, resulting in escape psychology and affecting mental health.

2.1. Decline of Image Information Discrimination

The same anti-lost devices with equal effects have significant disparate properties at different times. The anti-lost backpack is suitable for the age group of 1-4 years old, and equipped with a hauling rope to attach the bag. The hauling ropes are mostly spring-loaded and retractable. Therefore, in case of emergency, the towing party can immediately take control by means of the hauling rope of the anti-lost backpack, and to achieve security and protection. Because of the limited scope of application of this equipment, tractors can grasp the control area. Therefore, it is possible to fulfil the security protection in the short term.

Research on the design of existing innovative anti-lost backpack, Researchers have learned about an ultra-wide band wireless communication technology (UWB) that is commonly used for positioning, while used the UWB technology. The distance between the location tag and the location base station can be measured. Place the locator tag in child's school bag. The positioning base station is mounted on the towing party's bracelet as a sensing device. The distance data between the two users is sent to the main control board in real time. When the users are more than two metres apart. The bracelet will flash and sound an alarm. This expands the child's range of movement, and to achieve an immediate warning [2].

Another device with a high degree of timeliness is the anti-lost watch, this product is well accepted in the market and is widely used for children in the age group of 3-12 years old. Due to the compact size of the anti-lost watch and portable, Smaller space to manoeuvre and therefore easier to use. When there's an emergency situation. The wearer can carry out the act of making a phone call or transmitting coordinate information in a timely manner by lifting the hand, pressing a button,

gesturing, and so on. Most of the popular anti-lost watches come with a locator function. The principle is that when the watch acts as a GPS signal receiver, When the receiver captures a tracked satellite signal. Then the watch calculates the latitude and longitude to obtain the exact position. The receiver receives the transmitted position information via the satellite system in a timely manner after triggering the transmit button [3].

There are multiple functions of anti-lost watches on the society today, and research studies have found that The Badilon 5s watch combines positioning through six methods, with positioning accuracy up to 20 metres indoors and 5 metres outdoors. When Bluetooth follow is switched on, once it exceeds 25 metres, the mobile phone then sounds an audible alarm and displays a map of the distance to the watch and there is a real-time listening function. Users on the mobile phone have immediate access to what's going on around them on the watch. The other one, the Pride Jr. K Watch. The selling points of this product are safety fence, one-key distress, track enquiry, shedding reminder and other functions, more accurate access to the security status of the user on the watch from the mobile phone [4].

2.2. Meeting the Need for Efficient Interaction

Interactivity in anti-lost devices is reflected in the associated interactive effects when the two are used together at the same time. Among them, anti-lost clothes are more obvious in terms of interactivity, and suitable for children from 1-4 years old to older adults. As the anti-lost suit is worn on the person's body, covering a large area of the human body, and having a more visually striking impact. This suit can allow the society to identify the wearer rapidly, therefore this can be benefit to a more efficient and convenient communication with the user [5].

Nowadays the anti-lost clothes that have been developed are known to more people. One of the more famous is the anti-lost clothing developed by a police officer from Jinan, China. The developer made it because his parents are Alzheimer's patients. He used his familiarity with the profession, applying the reflective stripes from the traffic police uniforms to the clothes and the back of the shirt has a logo for a specific group of people .Obliviously this suit proactively signalling to the outside world that special populations require special care and a QR code can be scanned for basic information about the wearer and emergency contacts which has been painted on the conspicuous place .Apart from this, the researcher added an NFC chip, When the user is lost and unable to provide accurate and precise information, also basic information can be quickly obtained by touching your mobile phone. In addition to this, children's high level of physical activity is taken into account in anti-lost clothing for children then created partially removable clothing design [6].

The anti-lost watches on the market are also highly interactive devices. Due to the small age group to which it applies. It is benefit to avoid tedious operations such as typing and adapted to the smaller size of the device. That's why the vast majority of anti-lost watches have a call function. Just insert the sim card,the real-time dialogue can be achieved. And the market has been licensed children's watches, radiation absorption rate in the country's safety standards within the range, is safe to increase the call function.

The Pride Jr. K Watch,this anti-lost watch can be used to contact others by touching the screen and buttons operation method, Supporting two-way calls while ensuring clear sound quality and Access to accurate and timely information. And there is a sensing device, wearing the same watch users, of you face to face shake to add friends, you can interact with your friends. On top of that, this watch has the ability to block unfamiliar calls that, It isolates external calls and messages, giving the user a safe and comfortable experience.

2.3. Direct Transmission of Information

Anti-lost devices are extremely transmissible. The receiver can be sent from the sender to the receiver through the device extremely quickly. Especially anti-lost clothing is most evident in the transmissible characteristics. As anti-lost clothing is worn on the body of a lost person in the vast majority of cases, they need to have strong and powerful markings to signal them to the outside world. The first point is the light bar from the exterior, The light of the reflective strip rummage becomes an obvious signal to the receiver as the outside light looks for it. The second point is the special logo printed on the clothes, when there is a demand for the logo exhibition, the outside world receives the transmission of this information will give the corresponding initiative. The third point is that the GPS positioning system on the anti-lost device can efficiently transmit latitude and longitude information, which is helpful in confirming the approximate range. As a result, anti-lost equipment is highly transferable to meet the need to find lost people in time to be found [7].

3. Discussion

The medium is characterized by its transmissibility, and its transmissibility ensures that information can circulate and be transmitted in the medium. Whereas anti-wandering clothing serves as a vehicle for conveying information on the wearer's body. Anti lost clothing provides a material level of support for the communication of information and is an important basis for the communication of information. Anti-Lost Clothing Compared to Anti-Lost Watches, The transmissibility of anti lost clothing is reflected in the number of groups for which it is intended. The anti-lost watch is a single, one-to-one, directed contact that Since the anti-lost clothing is posted on the surface of the carrier, the information is retained for an extremely long period of time. As long as it is worn by the user and exposed to public view. That is, broadness is satisfied through transmissibility which covered all witnesses with extremely wide range. Therefore, anti lost clothing is mostly used for people in the younger age groups who cannot express themselves normally and for people who are sick [8].

People of different ages have different needs for anti-lost equipment and anti-lost equipment also fulfils the function of a communication medium nowadays. Therefore, users can choose a more compatible device according to the age group they are in and the corresponding needs. It was found that by installing an anti-lost system for the elderly in the developed garment, the design goal is to prevent the elderly from getting lost based on the video summarization technology [9]. A study found that based on the current 5G network technology enhancement for different age groups of the lost situation, the design of anti-lost system including anti-lost terminal, management centre data cloud platform and monitor APP. By interfacing with the platforms of public security, medical care, children's anti-lost and elderly care organisations, it forms an overall anti-lost solution based on 5G and Internet technology that integrates precise positioning, video linkage identification, intelligent collection, on-site warning and command and scheduling [10].

This study summaries the salient features of three of the more popular anti-wandering devices available today, which serve different utilities in different situations. However, a number of devices have been developed with targeted effects and special features, and of the three devices studied in this paper, there are also significant drawbacks at the same time. For example none of the three products can be used for a long period of time. Anti lose clothing and anti lost bags need to be cleaned in a timely manner, and anti-lost watches need to be empowered by charging. There is also a high rate of loss as all three products are not mandatory to keep with you. Instead, this article compares the effectiveness of the products based only on their characteristics, which can meet a clear need for anti-lost equipment, but it's impossible to judge which device on the market is more worth buying or eschewing. This is because this paper does not give an evaluation of the advantages and disadvantages of the specified product in relation to the disadvantages of the device.

4. Conclusion

In general, this paper focuses on the main characteristics of the media when anti-lost devices are used as communication media, and points out the different effects embodied in different characteristics. The vast majority of anti-lost devices on the market carry a positioning function, when the positioning message is synchronized to the device's master control, there is a chance that personal private information will be exposed, what mechanisms are used by these devices to ensure the security of private information, and whether there is any relevant data that can be compared and analysed. Comprehensive use of the situation, there is an over-reliance on the device, thus ignoring the psychological needs of the wearer, leading to the removal of the device, such as the human factor removed, anti-lost equipment is still a way to ensure the location of the user. Another over-reliance on the device is that the monitor relies entirely on the anti-lost device to ensure the whereabouts of the anti-lost device to meet the 100 per cent probability of anti-lost.

References

- [1] Wang Bingzi. *Hot News/Family tracing tape with missing children's information is on fire, have you ever received such a delivery?* *New Qilu One Point*, 2022-5-25(10).
- [2] LIU Zixuan, YUAN Yufei, ZHANG Yaxin et al. *Children's anti-lost schoolbag Secondary School Science and Technology*. 2022(16):41.
- [3] Ge Weifei, Ci Yanke, Chen Zhulin. *GPS-based smart safety watch positioning system Technology Outlook*. 2016, 26(33): 130.
- [4] Wang Sitong. *Children's phone watches are the "safety talisman" for children Quality and Certification* 2017. (03): 78-80.
- [5] Zhang Yu. *Jinan police designed "anti-lost clothing" fire! The love and filial piety hidden in each design is tearful.* *New Jinan Hot News*. 2023-5-14.
- [6] Shen Lei, Sang Panpan. *Design and development of anti-lost elderly intelligent clothing Knitting Industry*. 2019(08): 61-64.
- [7] LIU Liyuan, FAN Xiujuan. *Acquisition and processing of GPS location data in anti-lost clothing. Journal of Beijing Institute of Fashion Technology (Natural Science Edition)*. 2015, 35(01): 20-25. DOI: 10.16454/j.cnki.issn.1001-0564.2015.01.004.
- [8] He Yi-wen. *Research on Adaptive Functional Clothing Design for the Elderly Based on Alzheimer's Disease*. Donghua University, 2022. DOI: 10.27012/d.cnki.gdhuu.2021.000886.
- [9] Hua Zeyue. *A study of first-person perspective video summarisation for the problem of elderly people getting lost*. Harbin Institute of Technology, China 2018.
- [10] Tian Liu, Lin Huangzhi, Lu Lei. *Design of anti-wandering system based on 5G Internet of Things technology. Scientific and technological innovation and application*. 2022, 12(25): 16-19. DOI: 10.19981/j.CN23-1581/G3.2022.25.004.