



## **An Empirical Study on Wrist Projector (Cicret Bracelet)**

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### **ABSTRACT**

The Cicret bracelet is a revolutionary product that is currently in the prototype phase, designed to project a touchscreen onto the wearer's arm. This enables users to access various apps and functionalities without having to physically take out their device, essentially turning their skin into a touchscreen. The bracelet has been created by four individuals from France and is being developed by CN2P SAS.

The technology of the Cicret bracelet offers a solution to several inconveniences experienced by smartphone users, making it a highly impressive product. Its potential market includes young people who are avid technology users, as well as businessmen, entrepreneurs, and industrialists. As technology continues to advance, people are always seeking new and exclusive products, and the Cicret bracelet offers a unique and innovative solution. From both an economic and social perspective, the Cicret bracelet has the potential to be a game-changing product, positioning it as a strong competitor in the digital products market.

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### **INTRODUCTION**

The Cicret Bracelet is a wrist-worn gadget that enables users to conduct any acts that can be conducted on a tablet or smartphone, except that this time the flesh itself is used as the input device rather than the gadget. The name of the device comes from the business, cicret, which created and sold it.

With a twist of the wrist, the water-resistant bracelet can be used independently as a wearable. You can use it to play games, look up the weather, read and compose emails, find locations, and more. Also, you can pair it with your smartphone through Bluetooth to activate speakerphone functions and take incoming calls. The Cicret will come in ten colours and two capacity sizes: 16GB and 32GB. In the footage, the band appears to be It is watertight and can be used alone or in conjunction with a smartphone. It can be connected with your current smartphone or used as a standalone device. This indicates that users do not need to take out their phones to accomplish all tasks when using a large screen display.

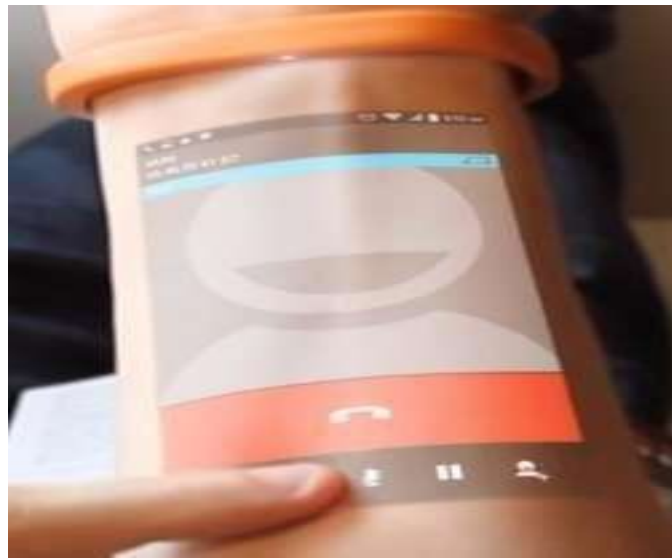
The Cicret Bracelet has an accelerometer, a vibration module, an LED for alerts, and other features. A micro-USB port, WiFi, and Bluetooth are all available connectivity choices. The actual device can be stored wherever Bluetooth or Wi-Fi is available.

With the Cicret Bracelet, one can perform all of the following.

- Reading the news while waiting for a train while checking and responding to emails while having a bath
- Looking at maps while travelling or riding.
- Engaging in video games
- Receiving the call while sitting away from the real physical gadget, i.e., smartphone; checking the temperature or weather; staying connected on social media; and checking the weather.



**Fig1:** Sample model of Cicret Bracelet



**Fig 2:** Usage of Cicret Bracelet

### Specific aspects of the product

The Cicret Bracelet comes in 16GB and 32GB storage options and is available in ten assorted colors. The bracelet is waterproof and may be worn alone or with a smartphone, according to the video.

Users can perform various functions on the large screen display without needing to use their phones. The bracelet has an accelerometer, vibration module, LED for notifications, Wi-Fi, Bluetooth, and micro-USB port.

It may be used to send and receive emails, browse the web, and play games directly on the arm. It can also be paired with a smartphone for incoming calls and speakerphone functionality.

The Cicret Bracelet features a Pico projector and eight proximity sensors that project an Android interface onto the skin. Users can interact with the projected interface using their fingers.

The device can be activated by twisting the wrist, and the video shows users typing on their skin while bathing and riding a bicycle, zooming in and out on maps and images, and more.

The device also allows users to set a timer for the lifetime of their outbox contents and to remotely edit or delete their sent messages. It enables users to exchange several types of files, such as pictures, videos, documents, notes, and audio, with anyone who has their CICRET ID. The files can be stored on a computer and remotely accessed on a smartphone via CICRET.

## Market Need

- While playing basketball or engaging in physical activity, it may be inconvenient to check your phone for an important email. However, with the Cicret Bracelet, you can view the screen on your arm during downtime on the court.
- When cycling to an unfamiliar destination, it may be unsafe to pull out your phone to check the navigation app. But with the Cicret Bracelet, you can quickly glance down at your arm for directions without any inconvenience or risk.
- At a crowded concert, it can be challenging to locate a friend without the risk of dropping your phone. Instead, you can use the Cicret Bracelet to text your friend directly on your arm.
- If your hands are covered in sauce while eating chicken wings, it may be inconvenient and messy to check your phone. But with the Cicret Bracelet, you can avoid getting your phone greasy and use the bracelet instead.

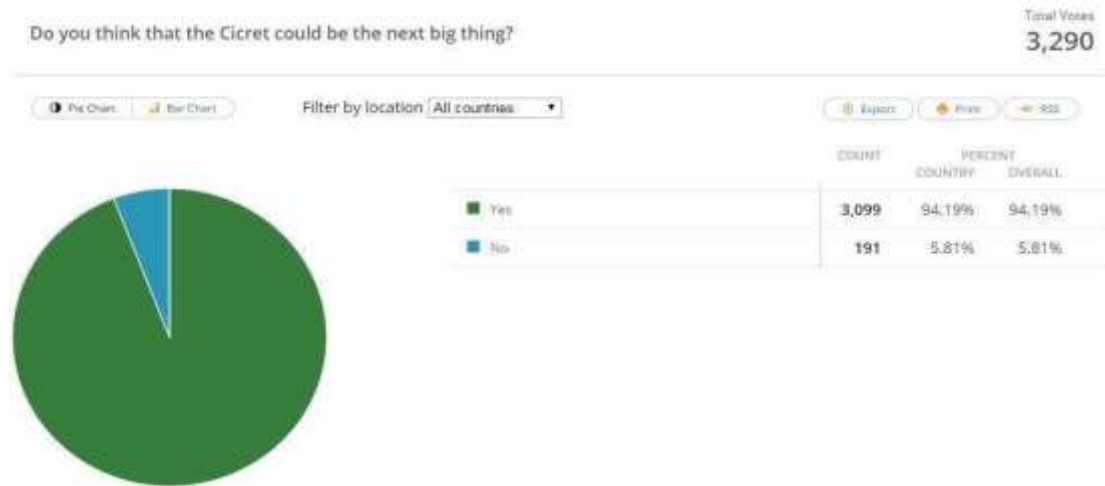


Fig 3: Results of survey conducted

## Future Growth and Characterized

- Works on every skin colour
- Android operating system
- Phone screen mirroring
- Removable battery
- Works with iPhone and Android devices
- Water resistant

The Cicret bracelet is designed to work on all skin colors and uses the Android operating system. It offers phone screen mirroring and a removable battery. It is water-resistant and works with both Android and iPhone devices. The smartphone comes in 10 distinct colours and has two storage sizes—16GB and 32GB. It can be used independently or in conjunction with a smartphone to enable users to conduct a variety of tasks on a large screen display without having to take their phones out. The bracelet features an accelerometer, vibration module, and an LED for notifications. It allows users to send and receive emails, browse the web, and play games on their arm and supports networking features like Wi-Fi, Bluetooth, and a micro-USB connector.

## Social conditions underlying this market need

Philip Kotler, a marketing expert at Northwestern University's Kellogg School of Management, defines marketing as the science and art of delivering value to a target market to fulfill their needs at a profit. Understanding the customer's needs and having agreement across the organization is crucial for effective marketing.

To achieve fast initial growth, Cicret can focus on serving an unmet need in the consumption job, but to sustain its growth, it must also focus on satisfying functional jobs better than existing solutions.

Cicret's product video highlights the unmet need of being able to use a smartphone in any environment, including the bathtub, which the company should focus on in its marketing message to realize high-growth sales.

Overall, Cicret should follow the example of Salesforce and expand beyond meeting consumption job needs to satisfy functional job needs to maintain its growth.

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### The profile of typical customers

As increased individuals rely exclusively on their smartphones for online activity, the significance of mobile marketing cannot be emphasized. By 2025, approximately three-quarters of internet users will be using smartphones to access the internet, thus it will be crucial for firms to concentrate on mobile marketing to connect with their target market. However, traditional marketing strategies may not work on this new medium, and companies need to develop innovative and contemporary techniques to effectively market their products and services to mobile use.

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### REVIEW ON LITERATURE

1. Helena Van Kerrebroeck, Kim Willems, and Malaika Brengman provide insights on the future acceptance of touch-enabled technologies in online shopping and how they can provide value to consumers. Kiran M Patil and S.L. Lahudkar's study suggests that touch projector technology still has room for improvement, as companies are working hard to enhance it. The current weaknesses of touch projector technology include the display surface and size, which can be improved with upcoming technology like Sixth Sense, which is a gesture interface that incorporates a data projector and camera.
2. In 1992, Tani et al. put forward the concept of controlling factory machines remotely by using a live video image displayed on a computer screen. This idea has since been developed further with the introduction of touch projector technology, which enables users to interact with remote screens via a live video image displayed on their mobile devices. However, this technology initially faced challenges due to the instability and lack of control of handheld video. Many experts have since attempted to enhance touch projector technology by introducing separate devices with their own operating system Pico-projectors are small, portable projectors that can display images or videos on a surface, such as a wall or a screen. They are frequently used to project images or movies onto a bigger area in mobile devices like smartphones and tablets.
3. In their research, Cauchard, Fraser, and Subramanian explore the design possibilities for pico- projectors and how those designs influence the choice of interaction techniques. They investigate how the user experience may be impacted by the pico-size, projector's shape, and location. The many interfaces that can be employed with pico-projectors, including touch, gestures, and voice instructions, are also taken into account.
4. Their research provides insights into how pico-projectors can be designed to create a more seamless and intuitive user experience. The interaction between the user and the projected picture or video can be made more effective and efficient by customizing the design of the pico-projector to the particular application or device.
5. The study by Thomas Kundinger, Phani Krishna Yalavarthi, Andreas Riener, Philipp Wintersberger, and Clemens Schartmüller focused on the feasibility of using wrist-worn wearable devices such as smartwatches or fitness trackers for driver drowsiness detection. They found that such devices were reliable in detecting drowsiness through the analysis of physiological data.
6. The authors also conducted an electrophysiological investigation on the activity of putamen neurons during voluntary movements of the distal arm in an awake monkey. They also proposed a novel approach to using robots in product lifetime testing to assess the factors affecting the wearability of portable tactile devices based on feedback from practicing professionals. They also described the use of a cursor-less watch user interface to minimize the need for users to look down at the device's built-in screen and presented a sample application to illustrate their interaction techniques.
7. The Bracelet seems to be a unique and innovative device that utilizes pico-projector technology and proximity sensors to create a user interface on the user's forearm. This allows for a hand- free experience since the user can utilize the interface without a pair of hands traditional touchscreen device. The device's activation with a wrist twist adds to its convenience, and the use of proximity sensors to detect the user's fingers enhances its functionality. The device's similarity to Chris Harrison's Skin put research further highlights the potential for wearable technology in the future. Overall, The Bracelet seems to be promising the advancement of wearable technology.

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### FINDINGS

- Cicret bracelet have thought of using initially proposed sensors.
- One finger is blocking the sensor from detecting other inputs.
- The projector light was harming the user's skin.
- They have had issues with the cameras, which caused some delays.

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## SUGGESTIONS

- To use an infrared laser and two cameras to detect touch input for the bracelet.
- To ensure the safety of the laser and has plans to include safeguards in the software to prevent harm to users.
- Remove all barriers.
- Any surface can be made into a touch panel.
- Making technology undetectable as Eco-friendly as feasible.
- Create a fresh tablet and skin with the CICRET BRACELET.

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## CONCLUSION

This product is currently a prototype and has not yet been officially released. The Cicret's creators have created a website to go into more detail about their vision, and they have also posted a video so that we can get a bigger picture. Several smartphone users' annoyances are eliminated by the amazing technology known as the cicret.

The team has received 8,641 donations so far, and they are 83.2% of the way to their target. It may not be impossible to create the Cicret bracelet and app using existing technology, but also not a thing that is now real. It's conceivable that a working Cicret will someday exist, but it's also possible that the idea will become vaporware.

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