Google Authenticator   Freecharge (company)   Snapdeal   Patents   India

How is freecharge's new patent to replace OTP different than Google Authenticator App?

As reported by Economic Times it replaced SMS based OTP using "a pin that resides within the phone and keeps changing every few seconds". This is essentially **TOTP** which is used in Google Authenticator App. What is the new innovation ? No trade secrets requires. Just from user's point of view.

5 Answers

Sriraj Silla, Knows a nano about IP(Intellectual Property) Systme.
351 Views

The authentication solution is called as 'On The Go Pin', and is aimed at making both online as well as offline transactions faster. This technology replaces the OTP received through text message with a **pin that is within the phone and keeps changing every few seconds**. From the backend, the servers of the bank and the merchants would be verifying the pin so that the transaction can be processed.

Attention please PayTM! FreeCharge files patent for OTP alternative ☑

According to my perception, the mechanism followed is something similar to **RSA SecureID** Mechanism where **a pin that is within the token keeps changing every minute** using a built-in clock and the card's factory-encoded random key ☑ (known as the "seed"). The seed is different for each token, and is loaded into the corresponding RSA SecurID server (RSA Authentication Manager, formerly ACE/Server) as the tokens are purchased. On-Demand tokens are also available, which provide a tokencode via email or SMS delivery, eliminating the need to provision a token to the user.

For More, Refer:

RSA SecurID ☑

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[RSA (cryptosystem)](#) ⤢

EDIT 1: The way that Google Authenticator and RSA system differ is the way they generate the random key.

[How do RSA SecureID ® Keys Work?](#) ⤢

[How does Google Authenticator work?](#) ⤢

Comments are always welcome. Suggest any edits if necessary.

Thanks..

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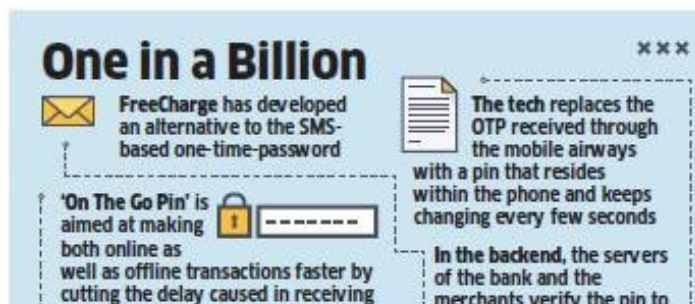[Should you use the Google Authenticator app for 2 factor?](#)

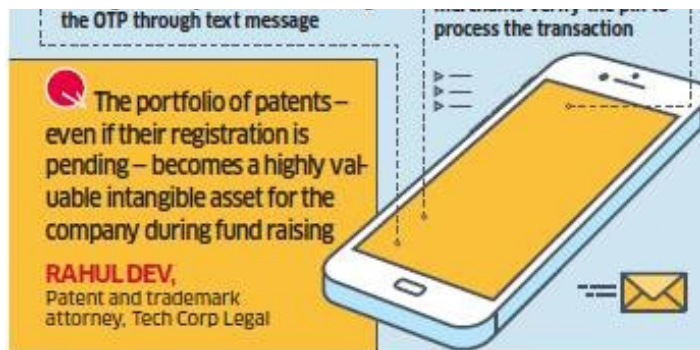[How does the Google Authenticator app for Android work offline?](#)

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Anonymous
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One in a Billion

✉ FreeCharge has developed an alternative to the SMS-based one-time-password

🔒 'On The Go Pin' is aimed at making both online as well as offline transactions faster by cutting the delay caused in receiving

📄 The tech replaces the OTP received through the mobile airways with a pin that resides within the phone and keeps changing every few seconds

In the backend, the servers of the bank and the merchants verify the pin to

the OTP through text message

process the transaction

The portfolio of patents – even if their registration is pending – becomes a highly valuable intangible asset for the company during fund raising

**RAHUL DEV,**
Patent and trademark attorney, Tech Corp Legal

Source : FreeCharge's patent filing for alternative to OTP a wake up call for other companies ↗

The technology developed by FreeCharge replaces the OTP received through the mobile airways with a pin that resides within the phone and keeps changing every few seconds.

In the backend, the servers of the bank and the merchants verify the pin in order to process the transaction.

It eliminates wait time for both the retailers as well as customers since often there is a considerable delay in receiving OTP due to network connectivity issues.

GOOGLE Authenticator
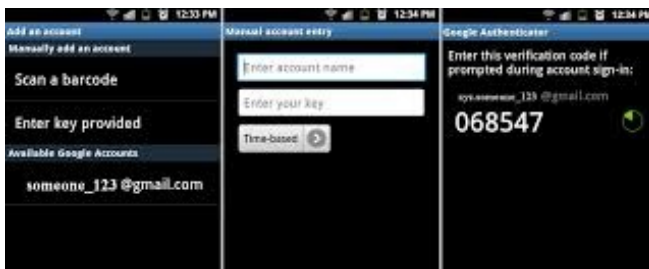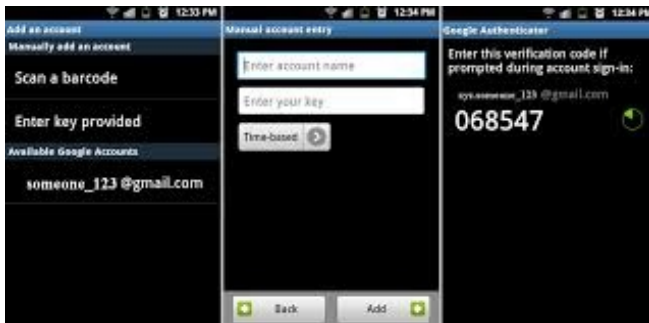
Typically, users will install the Authenticator app ⧉ on their smartphone. To log into a site or service that uses two-factor authentication, they provide user name and password to the site and run the Authenticator app which produces an additional six-digit one-time password. The user provides this to the site, the site checks it for correctness and authenticates the user.

For this to work, a set-up operation has to be performed ahead of time: the site provides a shared secret ⧉ key to the user over a secure channel, to be stored in the Authenticator app. This secret key will be used for all future logins to the site.

With this kind of two-factor authentication, mere knowledge of username and password is not sufficient to break into a user's account. The attacker also needs knowledge of the shared secret key or physical access to the device running the Authenticator app. An alternative route of attack is a man-in-the-middle attack ⧉: if the computer used for the login process is compromised by a trojan ⧉, then username, password and one-time password can be captured by the trojan, which can then initiate its own login session to the site or monitor and modify the communication between user and site.

Source : Google Authenticator ⧉

Typically, the difference is easiness of using and implementing the technology. Freecharge has made it a bit easier and so filing its patent.

Freecharge will be using numbers generated from/in your mobile not using airways pins.

Gaurav Singh, An Electronics & Comm. engineer.
816 Views • Upvoted by Ashish Kedia, 21 years & 21 states. Still Counting. Indian at heart.

There is a buzz around this new patent of Freecharge.

As reported by various electronic and print media channels it says (something like):

"The technology developed by **FreeCharge replaces the OTP** received through the mobile airways **with a pin that resides within the phone** and keeps changing every

few seconds.

In the backend, the servers of the bank and the merchants verify the pin in order to process the transaction. Govind Rajan, the chief operating officer of FreeCharge, said it eliminates wait time for both the retailers as well as customers since often there is a considerable delay in receiving OTP due to network connectivity issues." --Times of India

When I tried to find more about it, I found that **it is not a technology patent** (Invention/creation of something uniquely new) rather it's a patent for business method.

What it means is it is not using any new technology but using technology in new field (business).

But the question is how the Indian Patent Office will respond to this technology. As per section 3(k) of Indian Patent Act of 1970, business methods are not patentable in India. Since FreeCharge has filed a Patent application with respect to a business method, the Patent application is most likely to get rejected by the Indian Patent Office. -- Patents: FreeCharge trying to free you from the hassles of OTP. | SiNApSE ⤴

So answer to the question is: "**It is no different from google authenticator** but just a different field for use"

Hope the answer helps !!!

Himanshu Bhatt, [Patent - Searching, Drafting, Analysis], Student, Observer, Teacher

893 Views

Okay, so I had to do some research myself before answering this.

First, the news article that you mention dates to Dec 10 2015, ⤴ so you can assume that they (Attorneys for Freecharge) filed recently. Now, since the patent application is *usually not* published within 18 months of filing its hard to comment on what exactly the technology is or how its different from Google?

Additionally, people won't answer your question since its (potentially) a million dollar matter. There are people (individual as well companies) whose livelihood depends on finding out what you've asked.

Moving on, everybody in the IP field would be looking forward to understand/ crack/ license/ map the said technology, so lets see when it shows.

Thanks.

Sarthak Bhatia, meh!

I will add to this soon. But its all comes down to different Aunthenticators and their use case. Outlook has a authenticator too.

Some patents are localised and some aren't. And also probably free charge is using some different Algorithms for encryption probably .

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What are the main differences between Twitter's Innovator's Patent Agreement and Google's Open Patent Non-Assertion Pledge?

How different must a new CRISPR system be in order to get an independent patent?

Why do the Google 2 step authentication (via SMS) numbers have different sender names every time?

Is there an easy way to transfer Google Authenticator codes to a new device?

Should iPad app companies be filing software patents if they're developing new UI/gesture mechanisms?

Google recently filed a patent for Smart Teddy Bear. How does it differ from Amazon Echo?

Should I register my software app in New Zealand instead of the US to protect my product from patent trolls with their new software patent law...

How does the 2 step authentication using Google Authenticator work?

How come this supposed cure for AIDS has not been made public, patent #5676977?

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It will be more stable, but less rich and less important. Whether it will be more democratic is the complicated question. In the next 5-10 years, the region will be even more unstable and messy. This is partly because the old imperial order is breaking down and new challenges to the existing regimes are rising -- from ISIS to the Muslim

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