




mobile  
connect

A woman with long dark hair, wearing a white and black striped top, is smiling and looking at her smartphone. The background is a blurred office or retail environment.

Operator cooperation  
in South Korea has  
created a successful  
identity solution

SK Telecom - South Korea

# Operator cooperation in South Korea has created a successful identity solution

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# Overview: driving a mobile identity solution to success

SK Telecom launched T-Auth in 2005 to enable online content providers to easily verify that their customers were of legal age.

SKT is the largest mobile operator in South Korea serving 28 million of the country's 57 million subscribers. South Korea is a very digitally advanced market, ranking #1 in the GSMA's Global Mobile Engagement Index<sup>1</sup>. To ensure broad service provider adoption, SKT and the other Korean operators realised that they needed to offer a single solution with full market coverage, and subsequently worked together

to offer unified technical and commercial integration. Now adopted by 99% of Korean websites, the resulting cross-operator solution drives revenue for operators of US\$40 million annually. It has also enabled SKT to open up new revenue channels by offering innovative value-added services based on the existence of a robust recognised identity.

## Understanding the opportunity

SK Telecom has been a pioneer in harnessing the potential of identity services. As early as 2005, it started offering T-Auth, its own mobile identity solution supporting a combination of mobile authentication and attribute matching.

SKT saw an opportunity in Korea's regulations, which require content providers to actively ensure that their customers are authorised to access particular content. Effectively, this means that content providers are responsible for checking that customers wishing to purchase content are over the legal age. SKT realised that its customer account information could help service providers meet this requirement. It designed T-Auth to address this use case with minimal impact on the user experience.

A SKT customer using T-Auth had to type their name, phone number and date of birth in the service provider's website. SKT then sent a prompt to the customer's phone to check that they are the person trying to access

the content, and returned to the service provider an indication of the customer's response and of whether the information matched its own records.

This mechanism enabled SKT to use its data to address a key service provider pain point, while maintaining the user's trust (SKT doesn't share customer data and informs the customer of the process taking place) and complying with strict Korean privacy regulations.

Capturing some value from the increased revenue that content providers expected to get by enabling a straightforward age check was enough to justify the launch of T-Auth. However, SKT realised that the same product could also add further value by addressing other use cases, such as password reset verification or proof of customer membership in-store.

# The need for inter-operator collaboration

Initially, SKT developed the T-Auth solution on its own. Being the largest operator in South Korea with 50% market share, its initial proposition to service providers was to “keep SKT users safe”. However, service providers were reluctant to use a solution which only addressed 50% of their customers.

SKT and the other two Korean mobile operators, KT and LG Uplus, considered each other as direct competitors, as they have the same core business: providing mobile connectivity. KT and LG Uplus launched KT-Auth and LGU-Auth respectively to address the same use case as T-Auth – and encountered a similarly limited uptake. However, after 10 years of acting independently, the three operators realised that they needed to co-operate in the identity market.

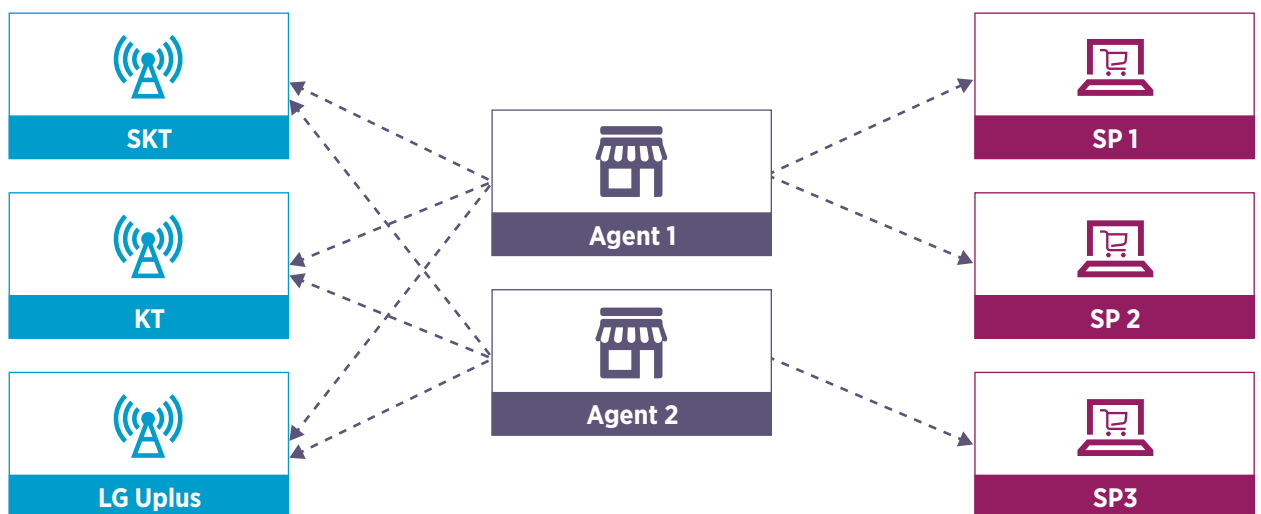
Each operator’s authentication solution covered only the operator’s subscribers, and did not act as a differentiator, meaning their identity offerings did not compete with each other. SKT, KT and LG Uplus

realised that offering their solutions together to service providers could help drive adoption and unlock the identity market.

In 2015, the three operators agreed that their appointed resellers – who were already in charge of selling their respective identity solutions – could also sell on behalf of all operators, thus offering service providers access to all of the market in a single agreement (see Figure 1). Resellers are responsible for service provider onboarding (jointly with the operators) and service provider billing. Resellers earn a share of the revenue generated for the operators, and compete against each-other to sell to service providers.

Over time, the operators appointed more agents to accelerate market growth – without themselves spending time and resources on selling their own and other operators’ identity solutions. As of August 2017, there are nine agents selling the cross-operator identity solution in Korea.

FIGURE 1: CONTRACTING STRUCTURE IN SOUTH KOREA

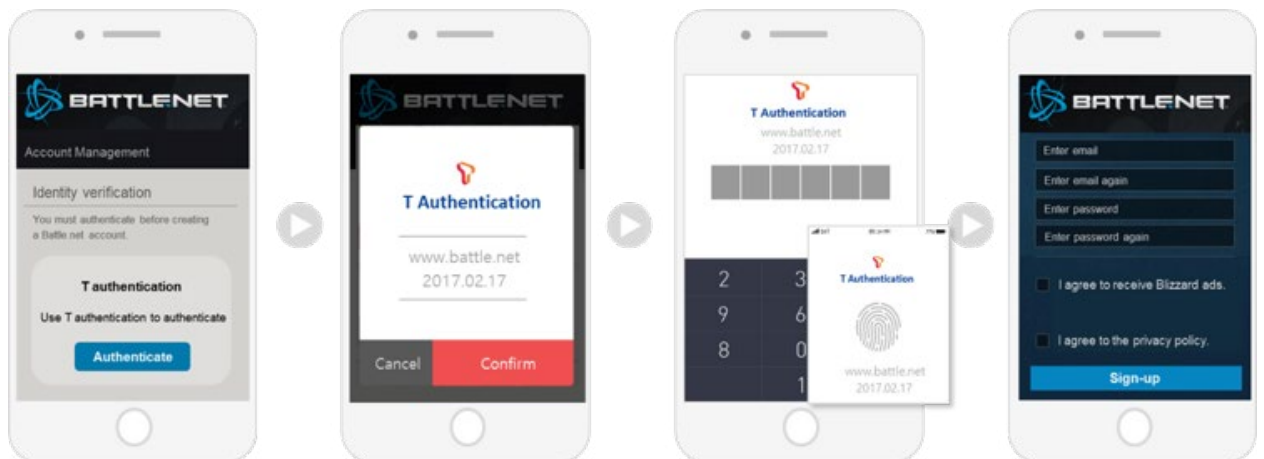


# Optimising the customer experience

Over time, SKT has worked to improve the user journey (see Figure 2). Consumers do not need to manually type in their details any more: the phone number is retrieved from the network and SKT shares all other relevant information with service providers – instead of the initial data matching – after obtaining explicit customer permission. All customers have to do is enter

their PIN code on their phone when requested. The replacement of the former SMS-based authenticator by a smartphone application has also streamlined the user experience, and monthly transactions have grown more than four times faster in the six months after the smartphone app launch, compared with the previous period.

FIGURE 2: SIMPLIFIED USER JOURNEY TO AUTHENTICATE TO A GAMING ACCOUNT USING T-AUTH



# Turning identity into a successful and profitable business

Identity has become a profitable business for the mobile operators in Korea, as they share around US\$40 million of revenue annually. Around 30,000 service providers in South Korea have now adopted the joint operator proposition, and some 650 million transactions are made annually through SKT's T-Auth alone – half of these being for the password reset use case. Notably, Samsung Pay, Samsung's mobile payment service, is now using the operators' solution for customer registration.

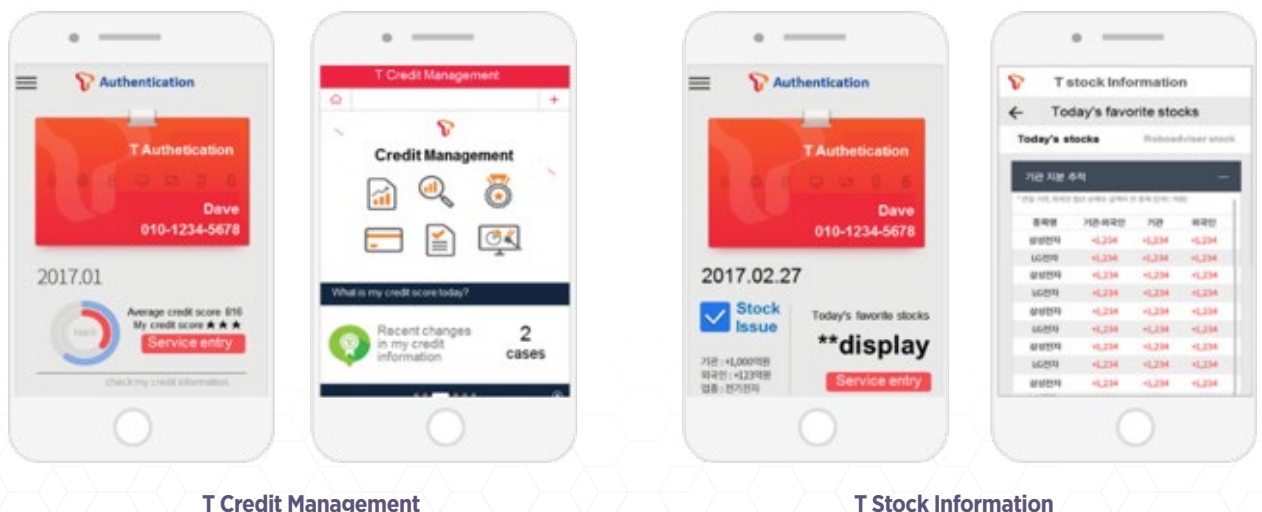
The mobile operators use several incentives to encourage their agents to contract with a variety of sectors. On top of the revenue share model, operators are granting limited time exclusivity of key sectors to agents which convert the first service provider in this sector. They also often offer discounts to these first-mover service providers to drive demand. As the competitive advantage gained by the first mover becomes apparent, other service providers in the sector quickly follow suit and adopt the operator solution. For example, KB Bank, the largest bank in Korea, has recently integrated the operators' identity solution into its mobile app to simplify money transfers. Since it added T-Auth to its application, KB Bank has seen an 80% increase in the number of

monthly transactions, and SKT expects this to encourage other Korean banks to adopt the operator solution.

The operator identity solution has been widely adopted in the commerce sector – where service providers are sensitive to losing their customers, and in the gaming sector – where Korean customers spend large amounts of money.

Finally, the provision of a secure identity has unlocked other revenue opportunities for SKT (see Figure 3). One of the new value added services, T-Credit Management, offers credit scores based on mobile contract history to students and recent graduates whom banks have little information on. This service, which costs customers US\$3 per month, relies on the existence of a strong customer identity solution. Similarly, SKT just launched T-Stock Information: this new application, which gives customers instant access to stock prices, uses T-Auth to enable secure trading through existing channels. Customers are charged US\$10 per month – and SKT earns a share on each trade that customers make through the application. This application is growing fast, accumulating 100,000 paying customers within two months of launch.

FIGURE 3: EXAMPLES OF SKT'S NEW VALUE ADDED SERVICES



# What is next?

## International expansion

SKT is now focused on expanding its offering to customers outside of Korea. Korean content is very popular in China and Japan, and Korean content providers are seeing millions of requests each month from people in these countries – which they have to turn down for security reasons. This lost revenue opportunity could be addressed if foreign mobile operators worked together with the Korean operators and offered similar identification capabilities.

In early 2017, SKT became compliant with Mobile Connect, the global mobile operator authentication, authorisation and identity framework. As a result, T-Auth is now interoperable with other mobile authentication and identity solutions provided by operators outside of Korea. SKT is looking to partner with operators from overseas to serve the latent cross-border demand.

## Learnings from the T-Auth team

### 1. Competition among operators means nothing in the identity business

Although operators compete vigorously for subscribers, this is not the case when launching identity solutions. SKT has experienced this dynamic, and is urging other operators to understand it quickly:

**“We acted as competitors in the identity business for 10 years, and it did not work. After 10 years, we realised that we needed to cooperate. Our competitors are outside: they are Facebook and the other over-the-top players, who are already providing identity solutions covering the all internet users globally. Operators need to work together against this competition.”**

Doyoung Kim, T-Auth lead, SKT

### 2. Operator data is valuable

Operators are the only party that has real-time customer information, and the value of the use cases served by this data – in particular, security and fraud detection applications – is quickly increasing. Operators can exploit the value of this data – while adhering to the strictest regulations and privacy standards – and unlock new strategic opportunities. With T-Auth, SKT has already demonstrated this is possible, and operators around the world can seize that same opportunity to increase their relevancy in the digital sphere and open up new revenue streams.

# Conclusion

Since SKT's launch of T-Auth in 2005 to address a key service provider pain point, the mobile identity solution has been adopted by 99% of Korean websites and has become a profitable business. This was made possible after all Korean mobile operators understood the need to cooperate to offer a single solution to service providers.

SKT has focused on delivering a great user experience that can provide Korean service providers with a

competitive edge. The provision of a robust mobile identity solution has also enabled SKT to offer new value added services, opening up new revenue streams.

SKT now plans to expand the concept to customers of operators overseas – in particular in the East Asia region – and is eager to partner with mobile operators in other countries to keep expanding the already successful Korean solution.









## Sharing best practice

**Any improvements you have made to your deployment(s) which have translated into strong numbers?**

**We want to hear about your experiences – and with your permission, help you share them for the benefit of all operators working in the Mobile Connect ecosystem.**

**Please get in touch with our Mobile Connect team at GSMA London, [mobileconnect@gsma.com](mailto:mobileconnect@gsma.com)**

To find out more about Mobile Connect, please visit [gsma.com/mobileconnect](http://gsma.com/mobileconnect)



**Identity**

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