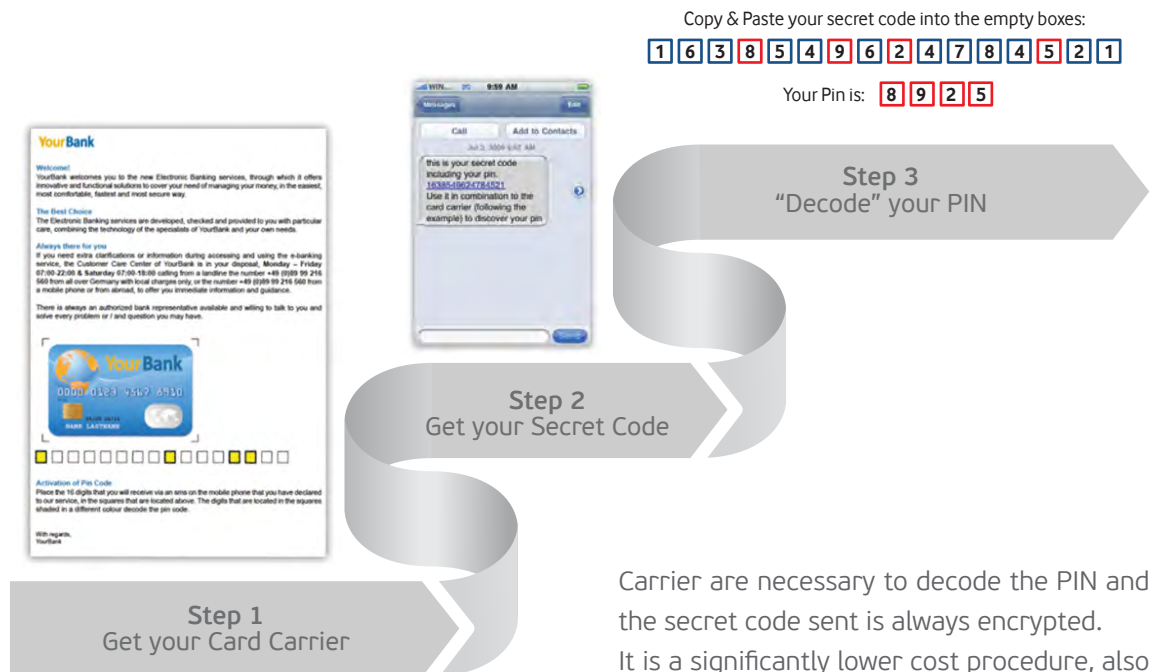




# » Smart PIN Delivery

**PIN Delivery**, is a patented component of i-DOCS that can be also deployed as a standalone application. It is ideal for delivering Credit and Debit Card PINs, Web Banking or Loyalty Card PINs. It fits in general for every case where PIN/Password is to be delivered through a separated process. i-DOCS Smart PIN comes in 12 different options based on user's requirements and business model.



### » The market today (benefits)

The most widely used method today is the separate posting of 2 envelopes, the card carrier (containing the plastic card) and the PIN mailer (containing the PIN), respectively. By introducing i-DOCS PIN delivery, the PIN is no longer sent to the cardholder in plain text through postal services, but an obfuscated PIN is transmitted via SMS, IVR, ATM or provided by an Agent and then the cardholder will have to "decrypt" it.

The introduction of this solution is beneficiary to both the card issuer and the cardholder.

It is simple, the card issuer is not required to proceed to any major changes upon the already existing procedures and any cardholder can perform the "decoding" action, which can only be performed by humans.

It is fast since the cardholder can acquire access to his/her PIN immediately upon reception of the card carrier.

It is secure, because no PIN is transmitted at all, both the "obfuscated" PIN and the Card

Carrier are necessary to decode the PIN and the secret code sent is always encrypted.

It is a significantly lower cost procedure, also offering marketing advantages, since no PIN mailer is required, no internet access is required, all SMSes are delivered using HTTPS API and all SMSs may be monitored, archived and processed along CSRs responses further enhancing the customer database.

### » The i-DOCS "Smart PIN Delivery" Approach

The basic idea is that the end-customer will receive:

- a) The Card Carrier with the plastic card and some instructions that will be used for "composing" the PIN
- b) A Secret Code including the PIN's digits in random positions. The positions are marked in the card carrier.

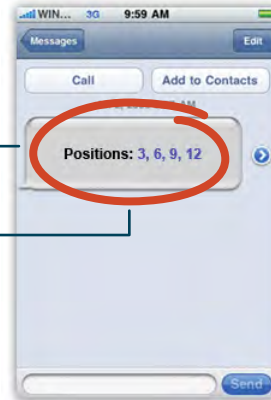
Thus, possession of the card carrier and the secret code will allow the end customer to retrieve the PIN.

Having any one of them on its own is totally useless.



Identification Code (OTP)

One option among others: Secret Code in Card Carrier and Positions through SMS



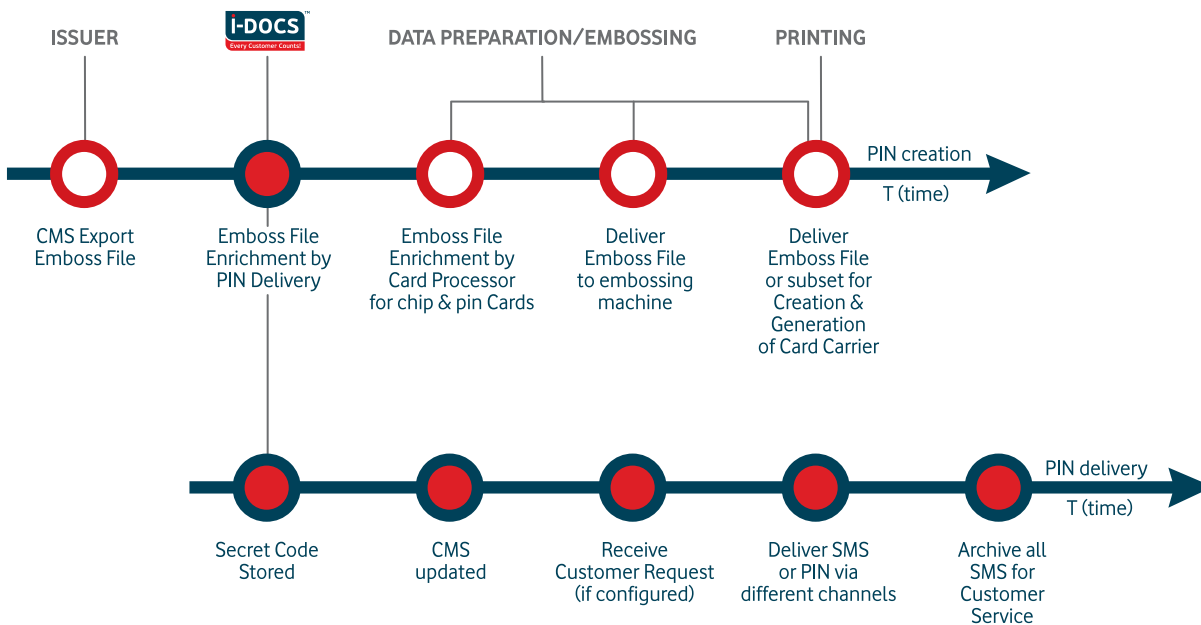
Secret Code

Positions

PIN

## » PIN Delivery Main Features

- Creation/updating of Embossed file (Card Carrier)
- PIN via SMS
- Reminder SMS
- Billing Reports/Metrics
- Services/Web Services
- Monitoring/Auditing
- Archiving solution that allows organizations to store and retrieve transmitted SMSes. Customers are also able to request them via web services.



## » Mathematics proving security

In combinatorial mathematics, a **combination** is an un-ordered collection of distinct elements, usually of a prescribed size and taken from a given set. (An **ordered** collection of distinct elements would sometimes be called a **permutation**, but that term is ambiguous; it can also mean "reordering of all terms", among other related notions).

$$C_{(n,r)} = \frac{n!}{r! (n-r)!} \quad P_{(n,r)} = \frac{n!}{(n-r)!}$$

In combinatorics, a **permutation** is usually understood to be a **sequence** containing each element from a finite set once, and only once. The concept of sequence is distinct from that of a set, in that the elements of a sequence appear in some order: the sequence has a first element (unless it is empty), a second element (unless its length is less than 2), and so on. In contrast, the elements in a set have **no order**; {1, 2, 3} and {3, 2, 1} are different ways to denote the same set.

## BENEFITS AT A GLANCE

- ✓ Decrease cost by avoiding PIN-mailer
- ✓ More secured operations through utilization of different channels
- ✓ Ability to utilize Smart PIN as reminder (2-in-1)
- ✓ Better time-to-market following the posting of the card the same day

### About i-DOCS™

i-DOCS is ADACOM's flagship product suite in the field of Customer Communications Management (CCM) that enables organizations to significantly Reduce Operating Costs (less printing, postage and IT costs), to Exploit opportunities for New Revenues (targeted advertising for Up-sell / cross-sell), to Enrich Customer Experience & Service (Interactive communications, personalized content, WYSIWYG) and to Gain a strong Competitive Advantage (Customer base micro-segmentation in real-time, Time-To-Market). Whether addressing Banking or other Financial Services Institutions, Telecom Operators or Utility companies, Private or Governmental organizations, i-DOCS offers best of breed technology products and solutions to meet their outmost target...to keep end-customers happy and loyal.

Key products and solutions include mass and on-demand Output Management with multi-channel delivery features, efficient Archiving with WYSIWYG capabilities, Interactive CCM such as Web Correspondence Management and Personalized Interactive Communications, Electronic Presentment & Payment addressing telecoms with EBPP solutions – banking with PFM (Personal Finance Management) and MIP (Merchant Information Portal) solutions, SMART PIN Delivery supporting alternative channels (SMS, ATM, IVR, POS, WEB, etc.), SMS Alerts and Notifications, iSIGNER for branch automation and paperless front desk operations and collect2win Loyalty Systems addressing financial services and modern telecom operators.

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