



Document version: v1

## The BankCard demo explained

<http://www.bankcarddemo.com> is a web site that demonstrates the capabilities of Information Cards as well as of the CardGears software.



Specifically, the demo shows the following:

- How a new Information Card can be issued to a user who already has an account on a web site
- How an Information Card can be associated with an existing user account
- How the CardGears Issue API works
- How the CardGears Data API works
- How an Information Card can be accepted and the user logged in

First, this document describes the preferred way to walk through the demo, then it explains some of the technical details.

## Demo walk-through

This is the preferred way to walk through the demo:

1. You start at the main page at <http://www.bankcarddemo.com>. The idea is that you can get a demo “bank account” and an Information Card attached to that account.
2. In this demo you first create an account in the old-fashioned way (i.e. with username/password). To do so, click on the “**Register**” menu item and fill out the form.
3. You can now manage your demo “bank account” by clicking on the “**Balance**” menu item. You can make arbitrary deposits and withdrawals and even convert the currency of your demo “bank account”.
4. Now it is time to get your BankCard. Simply click on the “**Get Card**” menu item and then on the submit button. You should get the Card in the form of a .crd file which should get imported into your Card selector. The username and password which are securing the Card are the same as for your demo “bank account”.
5. If you have a Card selector which supports previewing Claim values (e.g. Azigo or the iPhone I-Card Selector), you can do that now. You will see that the BankCard contains the currency as well as current balance of your demo “bank account”. You will also notice that the balance is highly dynamic (it changes slightly every time you view it).
6. Now log out from the BankCard demo web site by clicking on the “**Logout**” menu item.
7. Now try to log in again by clicking on the “**Login**” menu item. Try logging in with your new BankCard.
8. The first time you log in with your BankCard, you will be asked for your demo “bank account”’s username and password. This step is called “associating” a Card with an existing account. You only need to do this once.
9. From now on you can at any time view your account balance directly in your Card selector, and you can easily and securely log in to your demo “bank account” with your BankCard.

Variation #1: If you do not yet have a Card selector installed, then in Step 4 you should be offered to install the Azigo Card selector, which after installation will automatically contain your new Card.

Variation #2: If you have an iPhone with the iPhone I-Card Selector, you should be able to perform Step 7 on the iPhone as well. This demonstrates the value of Information Cards on mobile devices.

## Technical information

What happens when...

### ... I register for a new demo “bank account”?

This step simply creates a new account in the internal account database of the BankCard demo web site. This does not involve CardGears or Information Cards at all.

### ... I deposit or withdraw money from my demo “bank account”?

Again, this simply makes changes in the internal account database of the BankCard demo web site.

### ... I click on the “Get my BankCard” button?

At this point the BankCard demo web site sends an HTTP Redirect command to your browser. It redirects you to the CardGears Issue API, which creates a new Card and sends it to you in the form of a .crd file. The request to the CardGears Issue API contains the following parameters:

```
card=<a randomly generated Card GUID>
cardcredentialusername=<the username of your demo “bank account”>
cardcredentialpassword=<the password of your demo “bank account”>
cardtemplate=urn:cardtemplate:d7a0b829-3f0e-448e-846a-805dc59eb32d
timestamp=1253267809
mac=ffadd753f9e33479eff41e19d2fbf05a2f8131dfaf7e6645a9b7a46e3c160d92
```

The BankCard Card Template has been previously defined in CardGears. The Card Template contains fixed information about the BankCard, e.g. its name, image and list of Claims.

The request also contains a GUID which becomes the GUID of the new Card. The BankCard demo web site “remembers” this Card GUID so that can it be linked back to your demo “bank account”.

The request does not contain the actual Claim values for new Card. Instead the pre-defined BankCard Card Template contains settings to enable the Data API.

### ... the Claim values are needed?

Instead of storing the Claim values in the CardGears server, the CardGears server attempts to retrieve them via the Data API from the BankCard demo web site. This request contains the Card’s GUID, which is used by the BankCard demo web site to look up the demo “bank account” for which the Card was issued. The BankCard demo web site then sends a response which contains the current Claim values:

```
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress=...
http://schemas.bankcarddemo.com/currency=JPY
http://schemas.bankcarddemo.com/balance=58655.223
```

### **... I log in with my BankCard?**

The BankCard demo web site reads the security token from the user's Card selector and checks if it is valid. Then it extracts the necessary information from the security token that can be used as a key to identify the user. For privacy reasons, the security token does NOT contain the Card's GUID. Instead the user key is a combination of the PPID (Private Personal Identifier) and the public key which signed the security token. If the BankCard demo web site has never seen this user key before, it asks the user to associate it with their existing demo "bank account" by entering their username and password. After that the association is remembered, and from now on users can directly log in with their BankCard without any extra steps.