HIEP: HTB Internet E-Wallet Protocol

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Abstract:
This document describes an online-paying method that realizes the paying addressing on the basis of HTTP protocol. It is for the purpose to setup a normative and safe E-paying system standard, and specify the definition of E-paying.
In the last version, we described how this system working with bank. We'd like to introduce the HART pay application functions we designed.

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1. Introduction

   Till now, there's no one paying addressing language to realize the online paying or data set's interoperating that COULD be used for definite or name of E-currency's widely used. Under the promoting by W3C, the future generation WEB of the semantic web is defined as "the WEB concept structure which COULD be handled directly by the machine". On the background of this technology, this ID describes an E-currency paying public infrastructure of the bank pre-positive system in the field of e-paying.

   Explanation of Nouns:

   Hart main account: Hart account platform within the account, refers to the domain name of Hart.

   Hart bank main account (Collection): Hart main account in the bank account corresponding to the open account which is a main account.

   Hart bank accounts (payment): Hart main account in the bank under the corresponding bank account of sub-account.

2. Conventions used in this document

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMENDED", "MAY", AND "OPTIONAL" in this document are to be interpreted as described in RFC-2119[RFC2119]. In this document, these words will appear with that interpretation only when in ALL CAPS. Lower case uses of these words are not to be interpreted as carrying RFC-2119 significance.

3. HIEP Problem Statements

At present, differentiation of the payment communication and system structure are formed by independent bank organizations or 3rd party payment company's leading position, that they are using different payment models to describe the objects, and formulate each standard. Those standards just extend the life time of each existed systems, instead ensure the data exchange or dataset's interoperation between different paying systems. Obviously, it will restrict the application field online paying, and it COULD not reach the ability and technique of handling the paying activities of all kinds of bank cards.

The real-time of paying is finally a bottleneck problem of the E-business development. Without solving this problem, furthermore, it will bring the unsafe hidden trouble on the capital operation. For the time being, we can only say in own scope utmost, as it only can realize the online paying with safe within each own system. It cannot make the real-time online paying, and can not reach the comprehensive integration of huge scale (supranational, super-region, super-section).

Currency's credit: The currency is a credit symbol of paying, people trust it to make it as the intermediation of substitution. It is accepted by the social due to its characteristic advantage comparing the metal money on "Gold Standard System" or "Silver Standard System". Obviously, the symbol in virtual paying organizations transaction MUST use a unique identifier, which COULD make into a definition when people using. This is the credit problem in the paying procedure.

4.HIEP Main Application Functions

4.1 Enterprise Version Functions

4.1.1 Domain Name Activation

Enterprise users COULD activate its domain name account on APP after its registration in bank, pls find details in "HART Domain Name Activation Procedure".

4.1.2 Bank Main Account Balance Inquiry

COULD check the balance, frozen amount, withdrawable amount, unwithdrawable amount

4.1.3 Account Transaction List Inquiry

COULD check the user's indicated transaction type, status, time, details

Details include transaction flow number, date, time, amount, type and status.

4.1.4 Bank Reconciliation Statement Inquiry

Check account platform supplied reconciliation list everyday, to fulfill the checking automatically.

4.1.5 Account Security Settup

Enterprise users COULD make the settup functions as transaction code and checkin code etc.

Find the Transaction Password

Amend the Transaction Password

Find the Checkin Password

Amend the Transaction Password

4.1.6 Enterprise Registration Data Inquiry

In the users interface, enterprises COULD inquiry the datas as domain name, company name, company add., contact, telephone, email add., business license, settlement bank, HART bank account, account status etc.

4.2 Individual Version Functions

4.2.1 Domain Activation

Individual users COULD activate its domain name account on APP(Individual Version) after its registration in bank, pls find details in "HART Domain Name Activation Procedure".

4.2.2 Bank Account Balance Inquiry

Service of account balance inquiry is available.

Inquiry Procedure:

4.2.2.1 Individual users send the inquiry request to account platform system by its HART APP;

4.2.2.2 The platform make out the information related after received the request, and revert to the APP;

4.2.2.3 HART APP got the data from the platform, and reveal to the end user in APP.

4.2.3 Account Rechargement

Individual users COULD realize the function of recharge from its bank account to its own HART bank account. This function via APP inlay the bank WAP interface, and fund transfering fulfil through the bank WAP. Details pls find in "Bank WAP Procedure".

4.2.4 Account Transaction List Inquiry

Service of transaction details inquiry is available

KEY phrase: opposite account, transaction amount, transaction time, transaction type, flow number

Inquiry procedure:

4.2.4.1 Individual users send the inquiry request via its APP to HART account platform system;

4.2.4.2 The platform make out the information related after received the request, and revert to the APP;

4.2.4.3 HART APP got the data from the platform, and reveal to the end user in APP.

4.2.5 Account Security Settup

Individual users COULD make the settup functions as transaction code and checkin code etc.

Find the Transaction Password

Amend the Transaction Password

Find the Checkin Password

Amend the Transaction Password

4.2.6 Payment Setup

Single Transaction Limit Setup: To setup each single transaction maximum amount within the bank limits;

Day Transaction Limit Setup: To setup every days accumulate transaction maximum amount within the bank limits.

4.2.6 Housekeeping Function

House regular payment business as water, gas, power fund by using the intermediary service platform interface with bank.

4.2.8 Applications Collection

Contractor businesses push their application links or introductions to the individual users via APP. Individual users COULD collect all the related and interested HART contactor business in this function, and collect those accounts.

5. Security Considerations

In order to realize the interconnection and mutual certification, the HIEP mutual information approval is refer to X.509V3 extension. It is merged into PKCS#12, the indicated HTB domain name MUST be the first level domain name of a bank. Bind the user's public key information with other identified information including the username and email add., to complete the certification of users on the internet.

6.IANA Considerations

The IANA will configure the HTB prot for HIEP.

7.Conclusions

This document describes the pre-position E-currency paying public infrastructure of bank in the field of the internet E-paying, that realize the HIEP on the HTTP protocol according to the open standard of W3C.

8.References:

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