Íslenskir staðlar

ÍST TS 310:2020

Gildistaka: 22.02.2022

ICS. 3.060

Tækniforskrift - Innlendar greiðslur og innlán

Technical Specification - Domestic payments and deposits

Íslenskir staðlar

ÍST TS 310:2020

Participants in ÍST Workshop VS-3 Innlendar greiðslur og innlán (e. Domestic payments and deposits) and participants in working groups preparing the workshop agreement.

Name	Company / organisation / association	Name	Company / organisation / association
Árni Björnsson	Samband sparisjóða á Íslandi	Ingibergur S. Stefnisson Íris Dögg Kristmundsdóttir	Unimaze
Ásgeir Helgi Jóhannsson	Atlas lögmenn	Jóhannes Þór Ágústarson	Íslandsbanki
Ásgeir Örn Ásgeirsson	Samtök fjártæknifyrirtækja/Meniga	Jóhann Þorvarðarson	Landsbankinn
Atli Mar Gunnarsson	Arion banki	Jökull Huxley Yngvason	Landsbankinn
Bjarki Jóhannsson	Creditinfo	Kjartan Ásþórsson	Kvika
Bjarni Þór Pálsson	RB	Kristinn Stefánsson	Arion banki
Björn Ingi Björnsson	Arion banki	Markús Guðmundsson	Sendill
Bragi Þór Guðmundsson	RB	Ólafur Bergsson	Íslandsbanki
Daníel Snorrason	Seðlabanki Íslands	Ólafur Eiríksson	Landsbankinn
Einar Eiríksson	Origo	Páll Arnar Guðmundsson	Creditinfo
Elfa D. Marteinsdóttir	Arion banki	Sigrún Gunnarsdóttir	WISE
Gísli Konráð Björnsson	Landsbankinn	Sigurbjörn Þorbjörnsson	TCM innheimta
Guðjón Karl Arnarson	RB	Sigurður Gauti Hauksson	Alskil
Guðmundur Jón Halldórsson	DataPlato ehf	Sigurjón Örn Kárason	Valitor
Gunnar Stefánsson	Arion banki	Snorri Karlsson	Íslandsbanki

Name	Company / organisation / association	Name	Company / organisation / association
Halla Árnadóttir	RB	Snorri Jónsson	Íslandsbanki
Halldór Vagn Hreinsson	Landsbankinn	Stefán Orri Stefánsson	Íslandsbanki
Halldóra G. Steindórsdóttir	Landsbankinn	Styrmir Kristjánsson	Sjálfstæður
Helena Pálsdóttir	FME	Sveinn G. Gunnarsson	Landsbankinn
Helena Rúriksdóttir	Arion banki	Þorsteinn Guðmundsson	Wise
Hermann Snorrason	Landsbankinn	Þorsteinn Lemke	Uniconta
Hjálmar Brynjólfsson	FME	Védís Ingólfsdóttir	Arion banki
Hrannar Már Hallkelsson	Arion banki	Védís Sigurðardóttir	Landsbankinn
Ingibjartur Jónsson	Valitor	Ingvi Rafn Guðmundsson	Íslandsbanki
Ingvaldur Einarsson	Uniconta		

1. edition

Table of contents

ICS. 3.060

ÍST TS 310:2020

TODO - [] Finalize the final of participants @gudval - [] Update final dates in foreword - [] Should end2enddescription be described?

Foreword

This ÍST Technical Specification was developed in accordance with “ÍST Reglur um tækniforskriftir, tækniskýrslur og vinnustofusamþykktir” (*e.* IST rules on Technical Specifications, Technical Reports and Workshop Agreements). The TS (Technical specification) was prepared by the technical committee TN-FMÞ (The Technical Committee on Financial Services) that operates within FUT (Sector committee for ICT standardisation) following a public call for participation within TN-FMÞ. The final draft was sent to the TN-FMÞ on the 2022-01-XX and approved by correspondence on the 2022-XX-XX. The text of ÍST TS-310 was submitted to IST for publication on 2022-02-XX.

The accompanying OpenAPI 3.0.1 defenition “IOBWS3.0.yaml” located at https://github.com/stadlar/IST-FUT-FMTH/tree/master/Deliverables, should be viewed as an integral part of ÍST TS-310. Future versions of the document “ÍST TS 310_2020 Domestic payments and deposits.md”, that is the source of this rendition, will be used to communicate errata and clarifications though each will need a workshop agreements to establish patch or minor releases of the IOBWS.

The work on the ÍST TS was primarly funded by Íslandsbanki, Arion Banki and Landsbankinn. It is the result the workgroup TN-FMÞ-VH-8. In parts the work is the earlier workshop agreement WA-310 authored by TN-FMÞ-VH-1 on Technical requirements and TN-FMÞ-VH-2 on Business requirements, with participation of an external consultant. WA-310 was approved within TN-FMÞ on the 2019-12-12. ÍST TS-310 should, however, not be viewed as a direct succesor to that agreement, which focused on laying groundwork for PSD2 compliance. Instead TS-310 is the next version of the Icelandic Online Banking Services, replacing TS 161:2013 *Greiðslur* and TS 164:2013 *Yfirlit bankareikninga*.

The Technical Committee’s participants have made every effort to ensure the reliability and accuracy

of the technical and non-technical content of ÍST TS-310, but this does not guarantee, either explicitly or implicitly, its correctness. Users of ÍST TS-310 should be aware that neither the TN-FMÞ, nor IST can be held liable for damages or losses of any kind whatsoever which may arise from its application. Users of ÍST TS-310 do so on their own responsibility and at their own risk.

Introduction

This Technical Specification (TS) present version 3.0 of the Icelandic Online Banking Services (IOBWS), for domestic payments and deposits.

Previous versions of IOBWS, released in 2007 and 2013 respectively, used the most recent OASIS SOAP standards at the time, to define common web service interfaces for the Icelandic market. This enabled software vendors, enterprises and service providers to integrate their accounting, payment, and information systems with the commercial and savings banks, to act on behalf of the customers and with full access to their data.

Iceland, with its homogeneous financial landscape, has enjoyed instant credit transfers between all the banks since 1987, with real-time gross settlements, and other universally accepted services such as the common collection solution (Kröfupotturinn) for issuing and paying claims. All this functionality was expected and has been available through IOBWS v1 and v2, comparable to the functionality enjoyed by users of the online banking Web UIs.

When initiating work on the previous versions, the participants in the TN-FMÞ started out with reviewing existing or emerging specifications in the global or mostly European financial industry. None were deemed a good fit at the time for local adaptation, as they reflected inherent the legacy in inter-bank communications outside Iceland, even in the case of other Nordic countries.

Meanwhile, the broader market and new technology standards in Europe been catching up. The Open Banking regulation in UK and the PSD2 regulation issued by the European Parliment gave rise to initiatives to standardize access to payment functionality and account information, on behalf of customers by third parties. One such effort, the NextGenPSD2 Framework developed by the Berlin Group, has met a broad acceptance in the EEA. The data model references ISO 20022, and close enough to how the Icelandic market has evolved as to make it a relatively straightforward to adapt IOBWS to use it as a base, instead of maintaining an independant linage of API specifications.

Another goal with v3 that is achieved in adopting the NextGenPSD2 Framework, is moving to a REST like API defined by a recent version of the Open API Specification, and implement open authentication and authorization standards that should solve some of the complexity involved with previous incarnations of the IOBWS.

1 Scope

ÍST TS-310 defines web application programming interfaces to be implemented by commercial and savings banks, when exposing common functionality and information for domestic payments and deposits.

Related ÍST TS documents address other parts of the overall IOBWS framework, either as upgrades to the previous specification or new additions in this version. As both the implementation and consumption of individual specifications is optional, the documents are mostly independent.

Some additional guidelines and common concerns will be addressed in the ÍST WA-316 workshop agreement, and other supporting material that might be similarily released through workshop agreements.

Due to the origin of the underlying OpenAPI specification in the Berlin Group NextGenPSD2 Framework, ÍST TS-310, and ÍST TS-313 on Foreign Payments ovelap. Both share the same underlying "IOBWS3.0.yaml" definition document, as well as schema types and API resources. The approach in both specification is also to focus on the domestic adaptations to the framework and refer to the implemenation guidelines for 1.3.8 of the NextGenPSD2 framework, if general issues need answering.

The intended audience for this specification document is implementors of banking services as well as those of those systems that will consume them as API clients. The reader is expected to have some basic knowledge of Icelandic payment and deposits products, but a fair amount of expertise when it comes to OpenAPI specifications. Consequently, the specification will forgo repeating documentation found in the accompanying YAML document, as much as possible. The previous IOBWS specifications e.g. version 2 did so out of necessity as the XML Schema and SOAP definition documents could hardly be considered human-readable. Today, a plethora of plugins, utilities, and API tools exist to help turn API specifications into navigatable UIs, that will without a doubt exists alongside all IOBWS v3 implementation. Repeating descriptions of e.g. schema types or even examples is therefore considered redundant in this document.

2 Normative references, definitions and symbols

2.1 Terminalog and Definitions

- **Kennitala**: The Icelandic ID number (often abbreviated as kt.) is a unique national identification number used by the Icelandic government to identify individuals, and with a comparable schema, legal entities in Iceland.
- **Icelandic IBAN** definition https://en.wikipedia.org/wiki/International_Bank_Account_Number ISO 13616:1997.
- **ISO 20022** is an ISO standard for electronic data interchange between financial institutions.
- **eIDAS** Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC
- **IOBWS** – The acronym for the Icelandic Open Banking Web Services, often used to refer to the project as well as its product.
- **FUT** is the IT sector council at Icelandic standards.
- **Berlin Broup** is a pan-European payments interoperability standards and harmonisation initiative with the primary objective of defining open and common scheme- and processor-independent standards in the interbanking domain between Creditor Bank (Acquirer) and Debtor Bank (Issuer), complementing the work carried out by e.g. the European Payments Council. As such, the Berlin Group has been established as a pure technical standardisation body, focusing on detailed technical and organisational requirements to achieve this primary objective.
- **PSD2** an acronym for the revised Payment Service Directive (EU 2015/2366) instituted by the European Parliament, meant to further open up payment services on the internal EEA market. Among other changes [PSD2] contains regulations of new services to be operated by so-called Third-Party Payment Service Providers (TPP) on behalf of a Payment Service User (PSU), by leveraging Strong Customer Authentication (SCA):

- **Payment Initiation Service** (PIS) to be operated by a Payment Initiation Service Provider (PISP) TPP as defined by article 66 of [PSD2]
- **Account Information Service** (AIS) to be operated by an Account Information Service Provider (AISP) TPP as defined by article 67 of [PSD2], and
- **Confirmation of the Availability of Funds Service** to be used by Payment Instrument Issuing Service Provider (PIISP) TPP as defined by article 65 of [PSD2].
- **PSU** – Payment Service User. The end-user of payment service.
- **SCA** – Strong Customer Authentication. Defined by the EBA in its RTS on SCA as "an authentication based on the use of two or more elements categorised as knowledge (something only the user knows [for example, a password]), possession (something only the user possesses [for example, a particular cell phone and number]) and inherence (something the user is [or has, for example, a fingerprint or iris pattern]) that are independent, [so] the breach of one does not compromise the others, and is designed in such a way as to protect the confidentiality of the authentication data."

3 Implementation

3.1 Service Overview

The aim of ÍST TS-310 was to stay as true as possible to the NextGenPSD2 specification, making it possible to easily compare against future version released by the Berlin Group in order to evaluate if the Icelandic version should be upgraded. After weighing a few approaches, this resulted in a decision to keep almost all of the NextGenPSD2 OpenAPI definition intact, even though some of the services described are not applicable currently to the intended use of IOBWS. The table below describes how this means the YAML contract includes e.g. Constent and Signing Basket services, whose removal would have a high impact on the contract structure but will not be implemented as part of this specification.

Table 3.1: Service support in ÍST TS-310.

Payment Initiation Service (PIS)	Supported by all implementators in accordance with the specification.
Account Information Service (AIS)	Supported by all implementators in accordance with the specification.
Confirmation of Funds Service (PIIS)	Optionally supported by the implementators, in accordance with the specification.
Consent Service	Explicitly not part of the TS-310 specification, but included for comparison and compatability with the NextGenPSD2 OpenAPI contract.
Signing Baskets Service (SBS)	Explicitly not part of the TS-310 specification, but included for comparison and compatability with the NextGenPSD2 OpenAPI contract.

3.2 Payment Initiation Service

An overriding goal of ÍST TS-310 was to keep the functionality expected by users of domestic payments, but move towards closer alignement with ISO 20022 whenever possible. Despite this, it turned out that a few additional parameters where needed, support value-added information exchange, and functionality as well as for compliance. The most straightforward way to communcate in the OpenAPI specification was to define separate domestic payment products (see following table) and applicable json schema types.

Table 3.2: Domestic payment products.

Credit Transfers	Transfer króna between two accounts within the same bank or between two domestic banks.
Claim Payments	Make a withdrawal from account to pay a claim (e.g. a bill). The claim can be created in any domestic bank.
Credit Card Deposits	Make a withdrawal from account to pay onto the account behind a payment card, within the same bank or between two domestic banks.

The document will further focus on highlighting the specific domestic adaptations and how they relate to

- **Only JSON is supported**: No XML is catered for in the payment products supported by the TS-310 specifications.
- **Credit Limit Query supported**: It is possible to query account information to get information on the allowed credit limit (withCreditLimitQuery).
-

3.2.1 Domestic payment products

The following elements are used in the domestic payment products:

Data Element	Credit Transfers	Claim Payments	Credit Card Deposits
endToEndIdentification	Optional	Optional	Optional
debtorAccount	Mandatory	Mandatory	Mandatory

Data Element	Credit Transfers	Claim Payments	Credit Card Deposits
debtorId	Optional	Optional	Optional
chargesAccount	n.a	n.a	n.a
ultimateDebtor	Optional	Optional	Optional
ultimateDebtorId	Optional	Optional	Optional
instructedAmount	Mandatory	Mandatory	Mandatory
creditorAccount	Mandatory	Mandatory	Mandatory
creditorAgent	n.a	n.a	n.a
creditorAgentAddress	n.a	n.a	na.
creditorName	n.a	n.a	n.a
creditorId	Optional	Optional	Optional
creditorAddress	n.a	n.a	n.a
ultimateCreditor	Optional	Optional	Optional
ultimateCreditorId	Optional	Optional	Optional
icelandicPurpose	Optional	Optional	Optional
chargeBearer	n.a	n.a	n.a
remittanceInformationUnstructured	Optional	Optional	Optional
remittanceInformationStructured	Optional	Optional	Optional
requestedExecutionDate	Optional	Optional	Optional
partialPayment	n.a.	Mandatory	n.a.
serviceLevel	n.a	n.a	n.a
centralBankPurposeCode	Optional	Optional	Optional

To highlight the use of each attribute the table below contains information on their use not obvious from the schema defenitions:

Field	Description
endToEndIdentification	Used by the deptor to send the short description across.???

Field	Description
debtorAccount	Debtor account is the account used to transfer money from.
debtorId	Should contain the kt. of the debtor.
ultimateDebtor	Ultimate Debtor identifies the party that owes the cash to the Creditor as a result of receipt of goods or services. To name the original recipient of the invoice, Ultimate Debtor, in cases where it is different from the Payer.
ultimateDebtorId	Ultimate Debtor identifies the party that owes the cash to the Creditor as a result of receipt of goods or services. Ultimate debtor kt. is included when different from the debtor Id.
instructedAmount	Amount and currency to be transferred.
creditorAccount	Creditor account is the account used to transfer money to Beneficiary's account. In the case of a claim payment, this would be contain the claim key as represente as a BBAN number.
creditorId	Can be used to define id of the creditor. Creditor is the party whose account is credited with the payment.
creditorName	The creditor name is not necessary due to the fact that kennitala is part of the IBAN number.
creditorAddress	The creditor address is not necessary due to the fact that kennitala is part of the IBAN number and kennitala can be used as lookup key through the national registry.
ultimateCreditor	The creditor (for example a finance company or an intermediary in a business transaction), may be different from the ultimate creditor. The payer can enter who the final/real beneficiary of the payment is.In the case of credit card deposit using the masked pan ultimate Creditor contains the owner of the card.

Field	Description
ultimateCreditorId	In the case of credit card deposit using the masked pan ultimate Creditor Id contains kennitala of the owner of the card.
icelandicPurpose	The purpose or as previously, category code (is. *textalykill*) used to classify the transaction. Determined by codes available in each originating bank.
remittanceInformationStructured	The debtors's information about the payment. The "referenceissuer" field contains the reference (is. *tilvísun*), that previously was used for the kt. of the creditor, that now has a separate parameter. The "reference" field is used for the bill number (is. *seðilnúmer*, 7 characters).
remittanceInformationUnStructured	Is used for payment description visible for both parties (is. *skýring greiðslu*). Only 16 characters can be expected to be used, even if the field accepts 140 characters.
executionDate	Execution date if not today, if used then set as a future date (is. *framvirk greiðsla*).
executionTime	Not supported by this specification. Would allow payment instruction to be performed at specific date, and time.
partialPayment	Applies when a claim is paid by paying an amount from debtor account towards an existing claim. If claim allows partial payment and API consumer want to pay for example ISK 500 of ISK 1000 claim, then this flag is used.

4 Accounts

This

4.1