CyberFT

Universal system for financial data exchange
and electronic documents workflow

2019

Contents

About the company and CyberPlat® system

- CyberPlat company was founded in **1997**. The company is a developer of the first and the largest electronic payment system in Russia called CyberPlat®.
- The company has a wide presence in Russia and Kazakhstan, with branches in India, Austria and Germany.
- CyberPlat® payment acceptance network consists of more than **1 480 000 outlets** at present.
- Payments in favor of more than 8 600 service providers are processed via CyberPlat®:

About the company and CyberPlat® system

- More than **300 banks-participants** of the system including:

- CyberPlat® system has a great capacity to process up to **40 Bn** transactions per annum.

- During **20 years** of stable work **no cases of hack** have taken place!

SWIFT – current situation

- Single system monopoly – SWIFT market share is about 90%
- High political dependence
- Out of date network topology based on the “star” model is vulnerable to targeted attacks
- A total of 4 datacenters located in the USA, the Netherlands and Switzerland

SWIFT – current situation

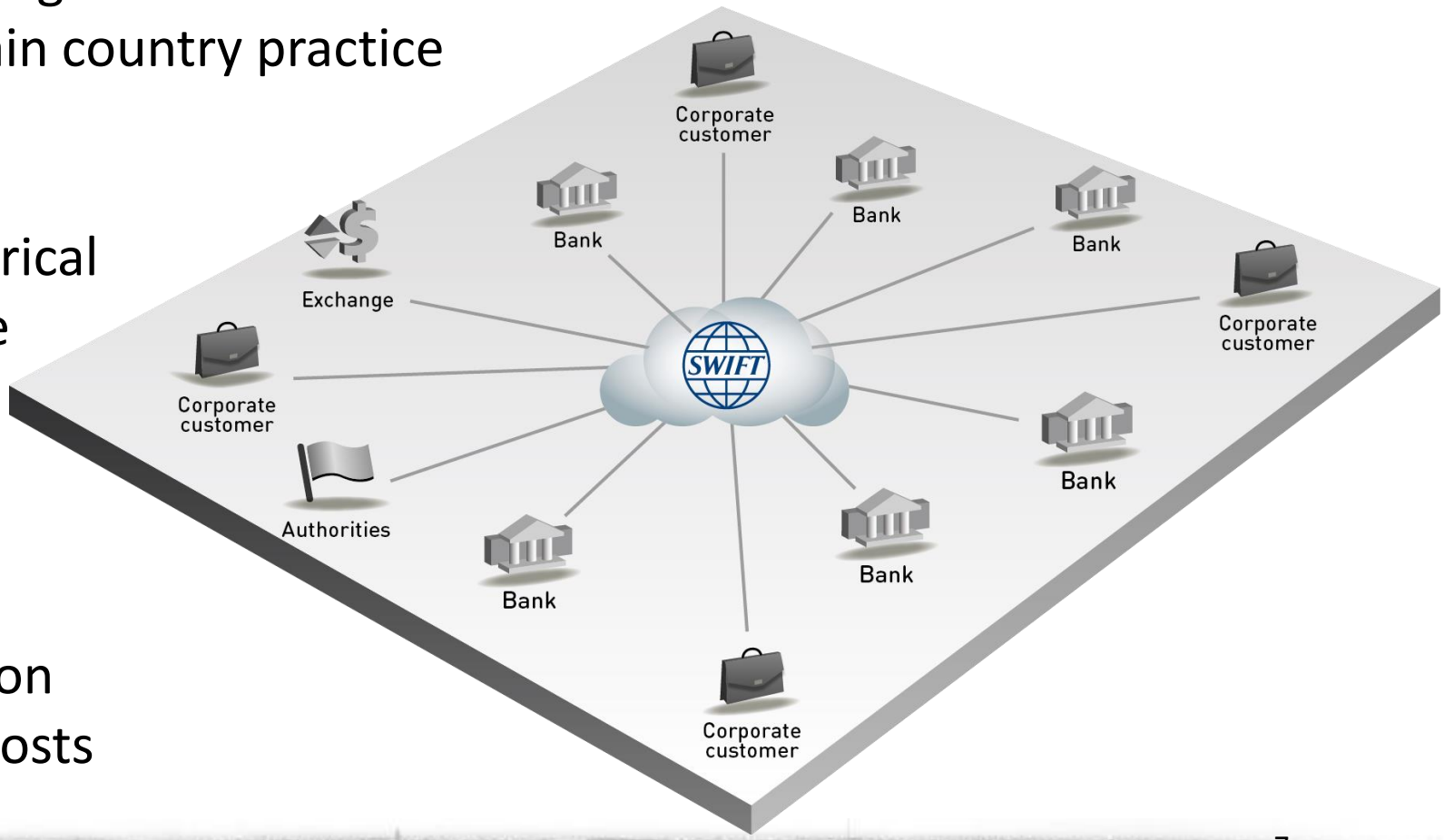
- SWIFT doesn't comply with requirements of local legislation of the most countries where domestic transactions shouldn't be processed outside country's borders

- Encryption method cannot be changed by participant's choice

- Data transmitted can be revealed by operator that causes risks of large-scale information leakage

SWIFT – current situation

- Difficulties in recognizing the legal value of the transmitted messages (in the event of conflict)
- Inflexibility of message formats and certain difficulties with their adaptation to certain country practice
- Short term of historical data storage on the processing side – **6 months only**
- High implementation and maintenance costs



CyberFT – new approach to financial data exchange

CyberFT allows **different legal entities** to securely interact with each other (e.g. banks, other financial institutions, corporations, state owned companies, authorities, entrepreneurs, individuals, etc.) both on **domestic** and **international** level

CyberFT – main definitions

CyberFT Platform

- A hardware and software solution for organization of a secure information highway for interchange of any types of financial messages and electronic documents workflow.

CyberFT Provider

- A legal entity that has bought and has become an owner of CyberFT Platform and uses it for offering financial messaging services to its counterparties.

CyberFT Processing

- Hardware and software solution that implements legally valid electronic documents interchange at CyberFT Network.

CyberFT Participant

- A legal entity or individual using CyberFT for data exchange.

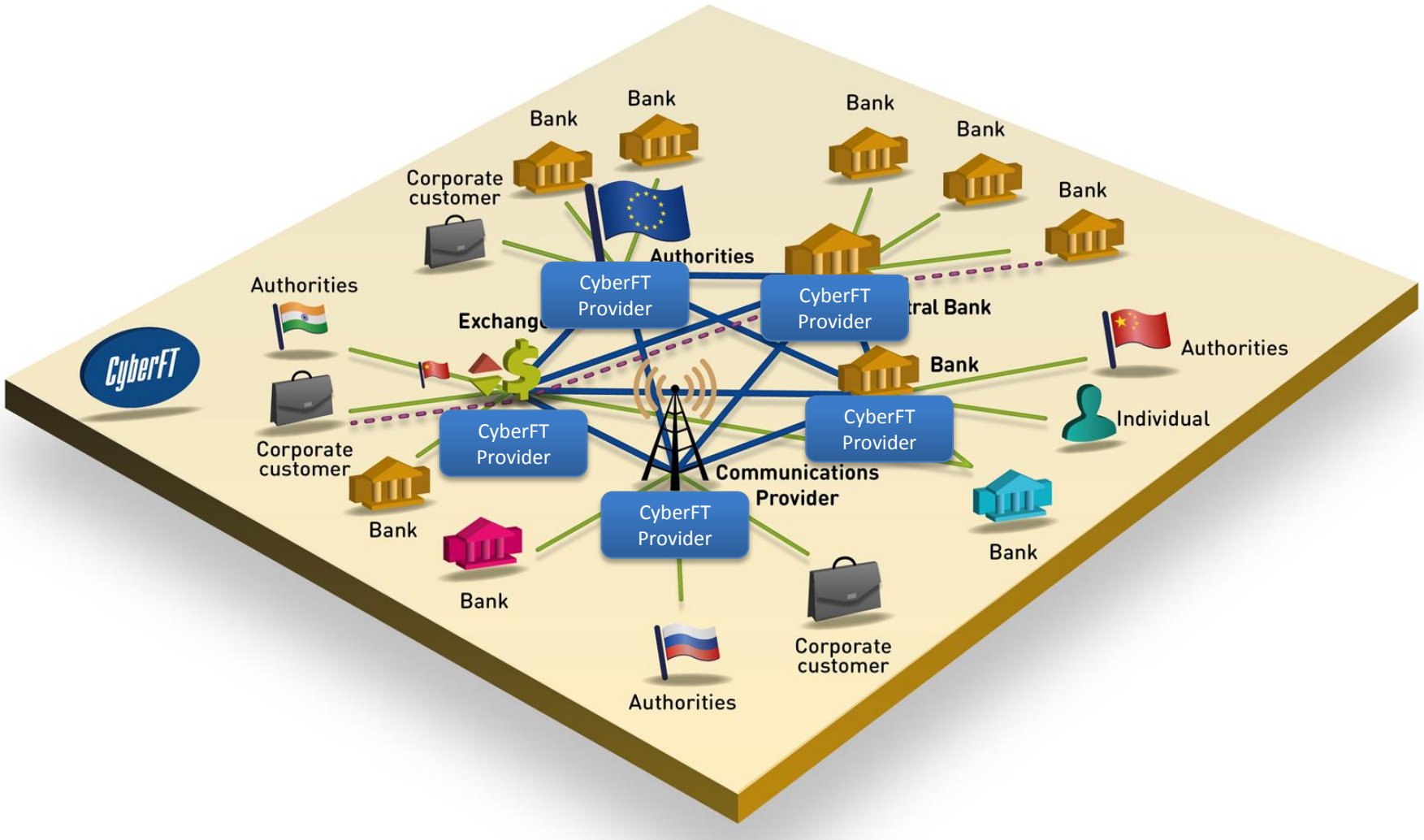
Customer Software

- A software installed at CyberFT Participant site aimed at interaction with CyberFT Network.

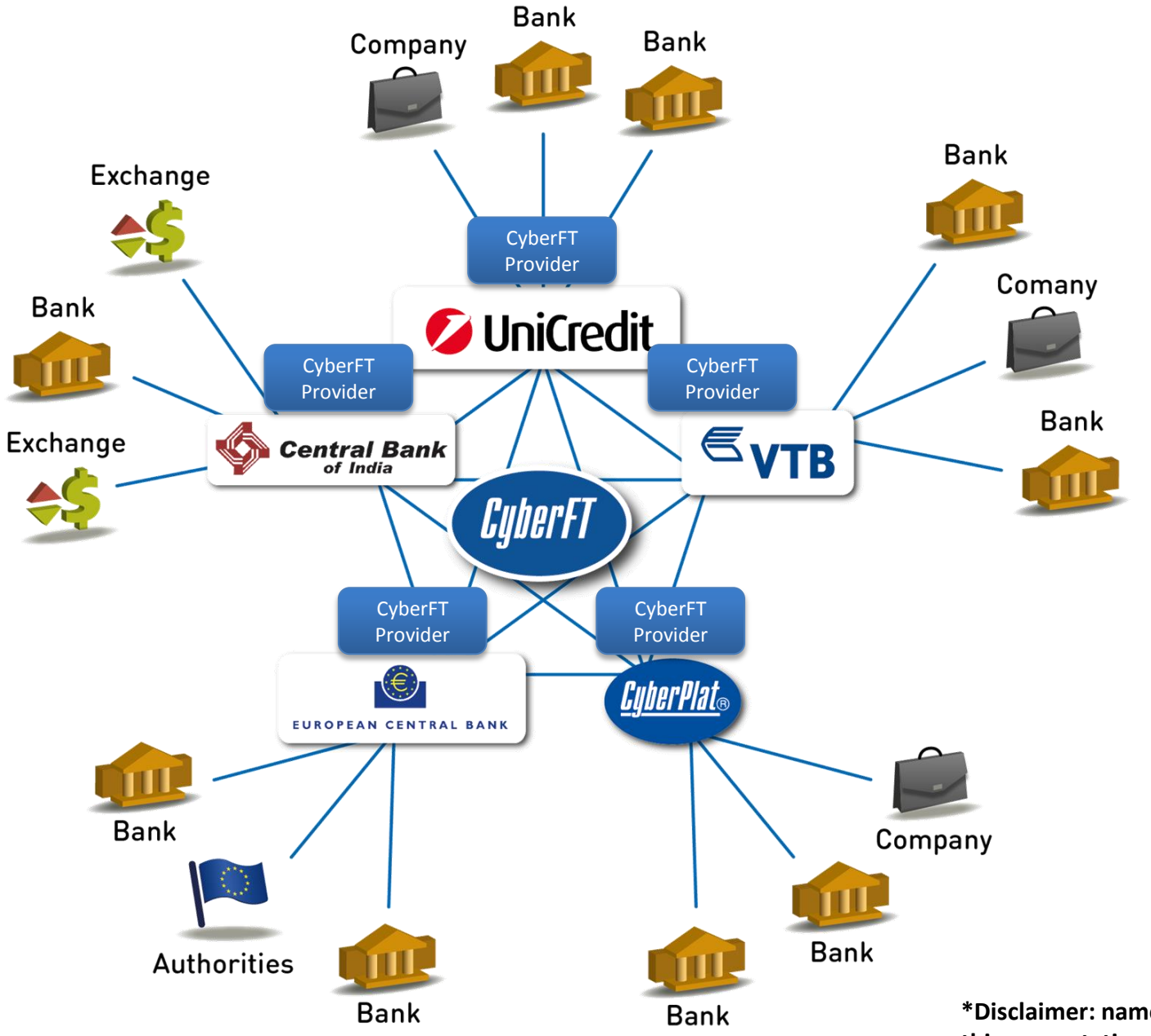
CyberFT Network

- A group of CyberFT Providers and Participants connected to these Providers.

CyberFT – new approach to financial data exchange



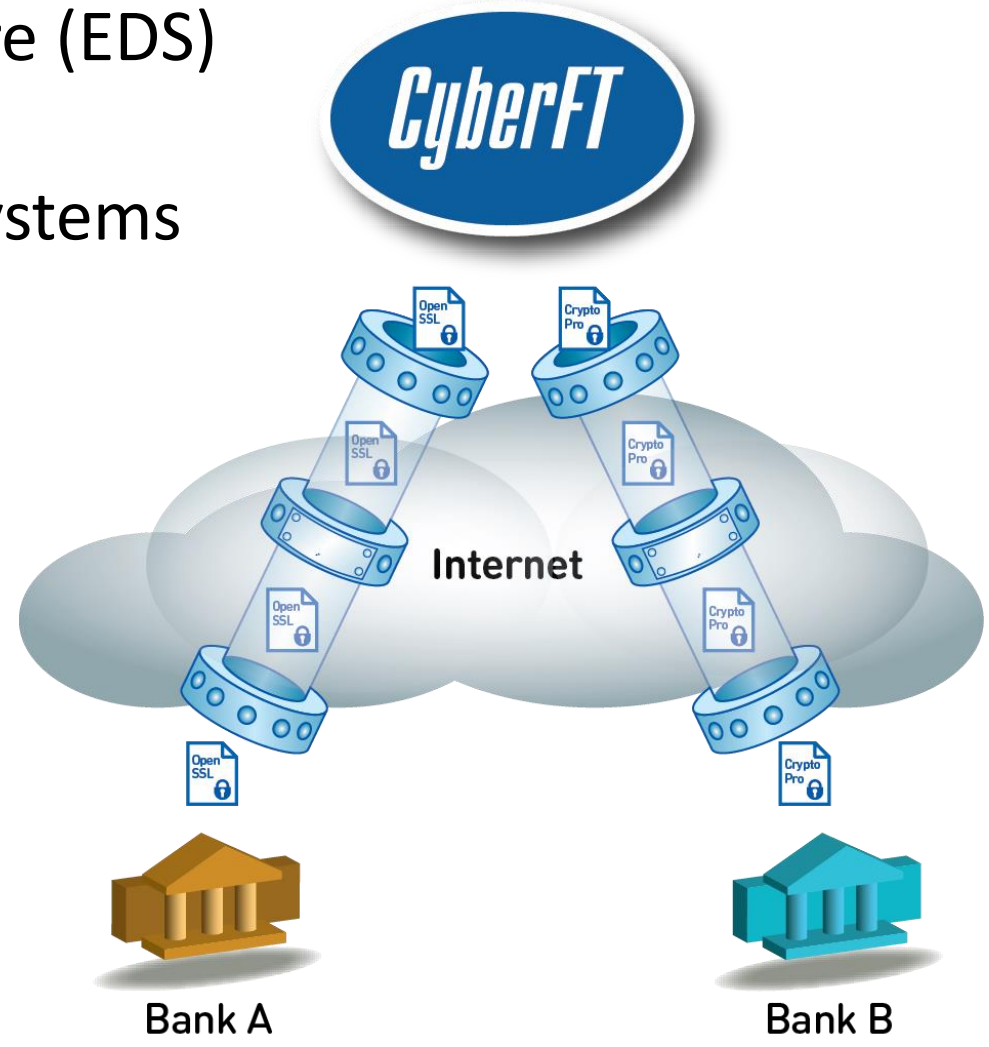
CyberFT – support of multiple providers



*Disclaimer: name of organizations presented in this presentation are for example purposes only

CyberFT – high security standards

- All transmitted messages are encrypted and signed by electronic digital signature (EDS)
- Support of various cryptographic systems incl. OpenSSL, PGP, CryptoPro, etc.
- HTTPS (TLS tunnel) protocol is used
- Data **is not accessible** to network provider
- Support of VPN and dedicated channels



CyberFT – flexibility

CyberFT already supports various types of message formats:

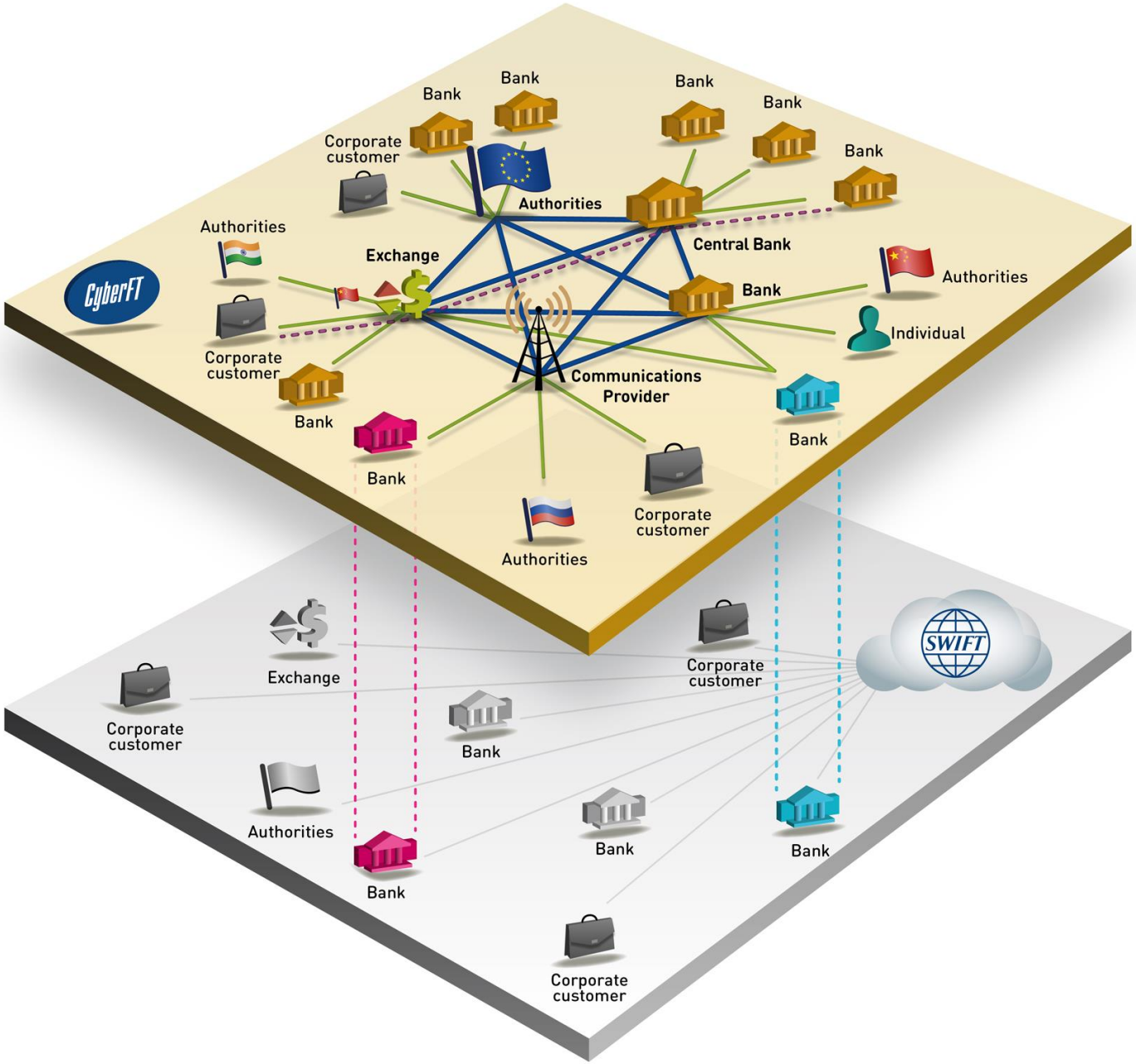
- SWIFT Fin (MTXXX) – all categories
- ISO 20022 (payments and account statements)
- Free format messages with attachments
- E-invoices and contracts
- Money transfers and payments acceptance

We permanently works on the system functionality enhancement and ready to develop any new format to meet customers or certain country specific needs!

CyberFT – current projects and future plans

- Support of typical integration with different core banking and ERP systems
- Further development of ISO 20022 formats in line with their adaptation for certain countries by customer requests
- Currency control documents
- Electronic documents workflow (e-invoicing, bills, etc.)
- Direct debit
- Tax reporting

CyberFT – cooperation with SWIFT



Connections between CyberFT providers

Connections between CyberFT clients and providers

Example of message routing

CyberFT – easy integration for banks

Possibility of simultaneous working in both systems: **not instead of SWIFT, but jointly with SWIFT!**

Core banking system

Before CyberFT implementation

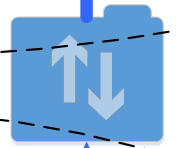
After CyberFT implementation

ADDITIONALLY

Possibility to send messages directly to SWIFT according to customer's settings:

- To the certain counterparties
- Of the certain types
- On the amounts exceeding certain limits

Core banking system

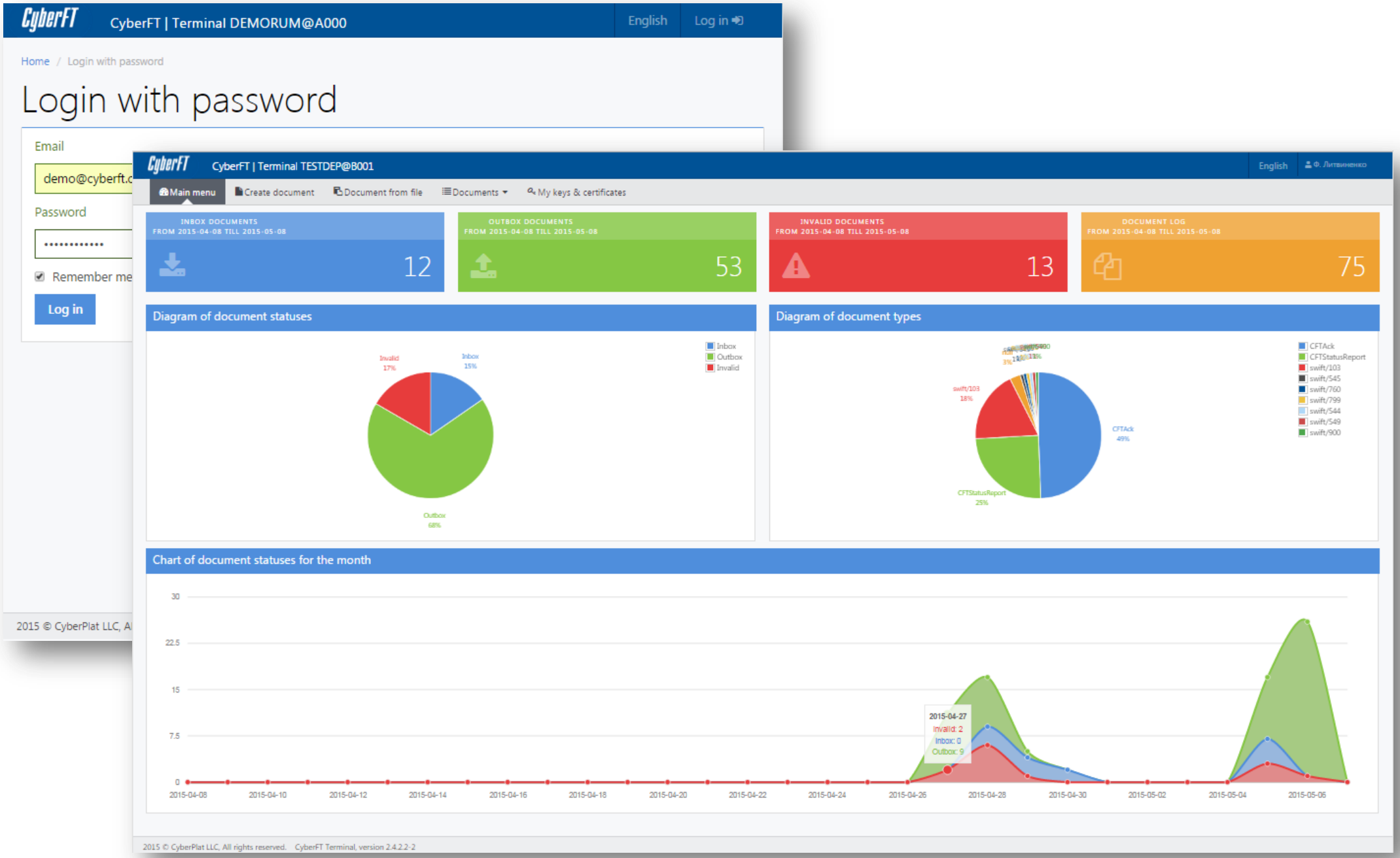


Message router

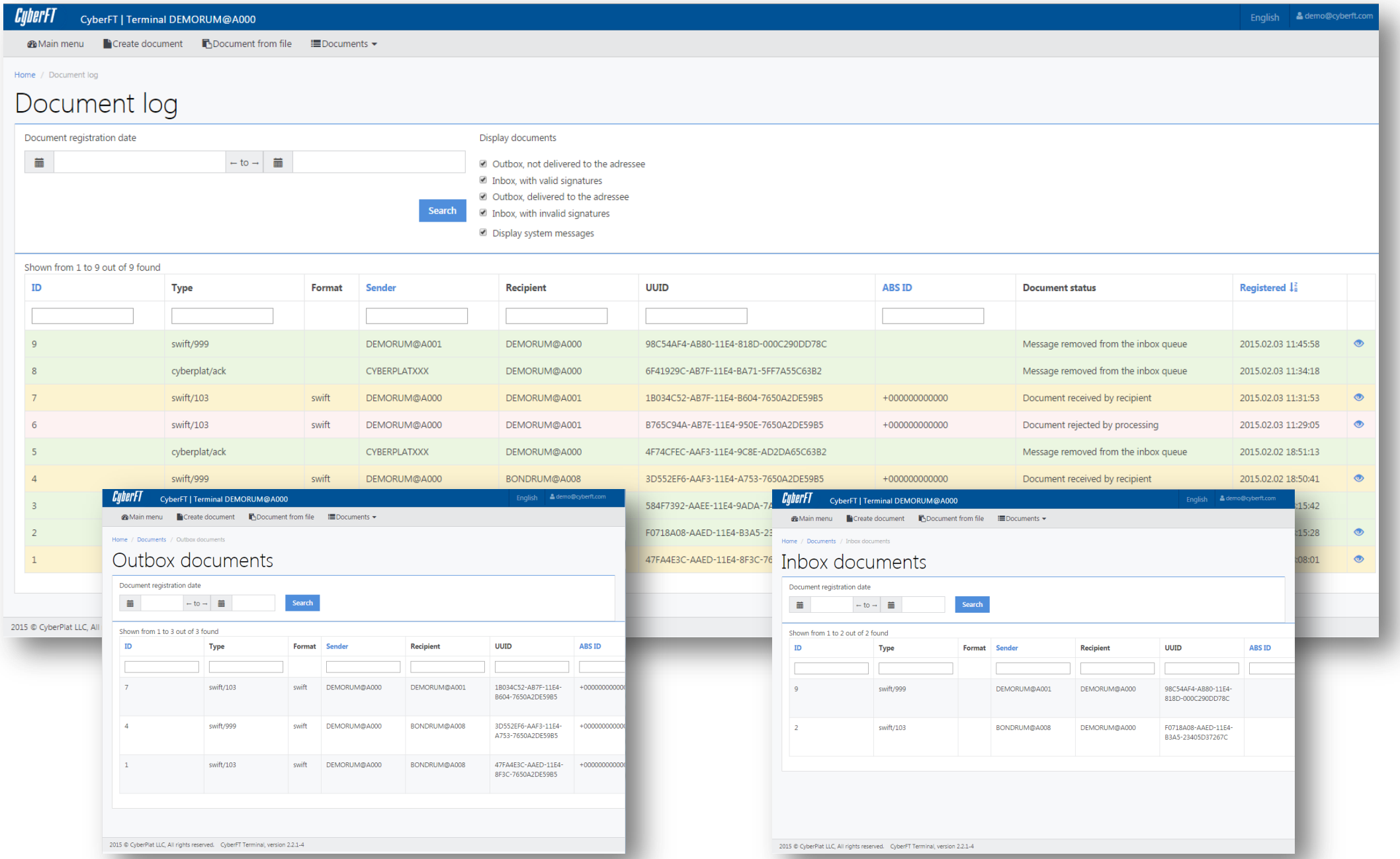
Message will be sent via SWIFT if receiver of the message is not a participant of **CyberFT**

Message will be sent via **CyberFT** if receiver of the message is a participant of **CyberFT**

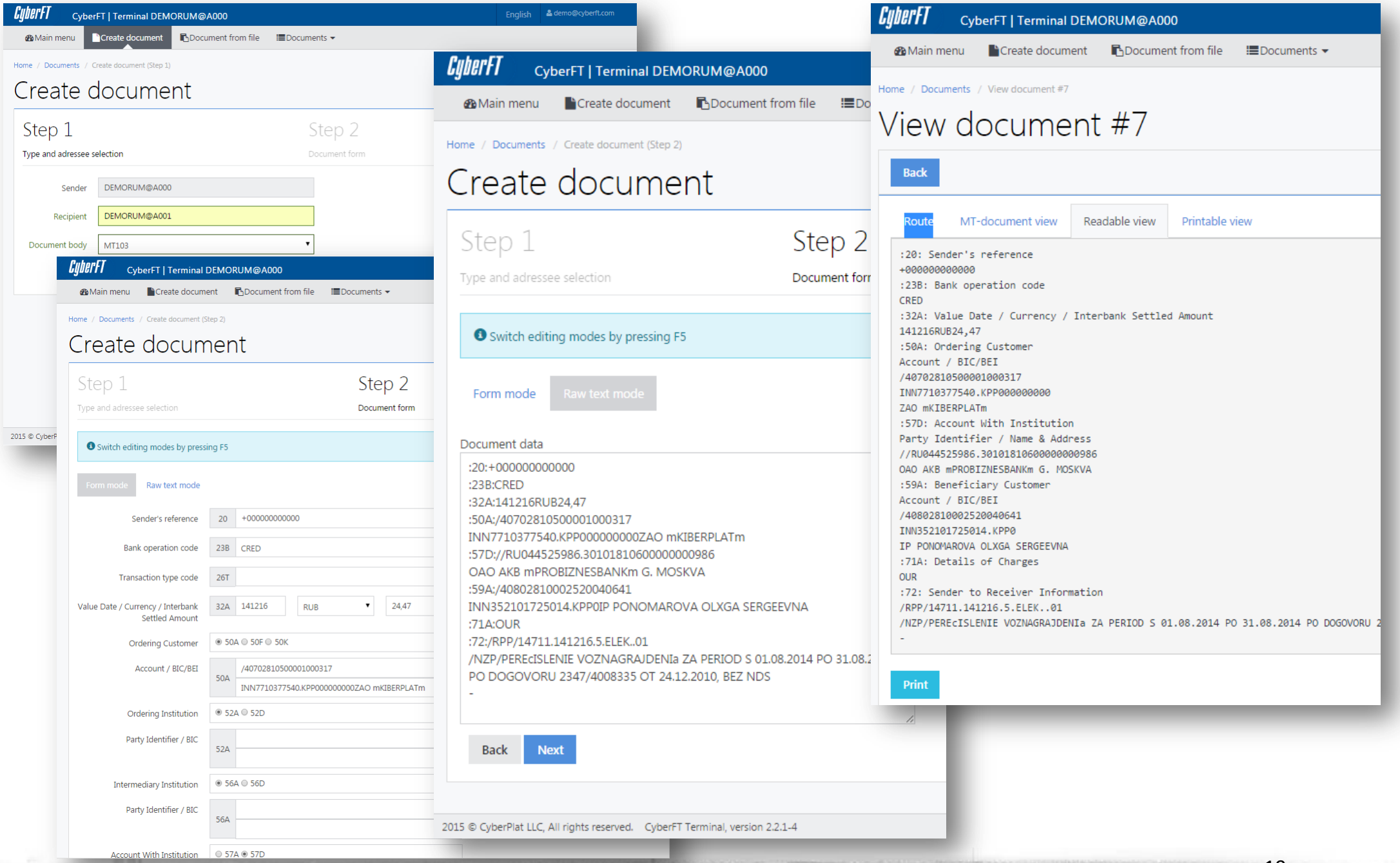
CyberFT terminal – main menu



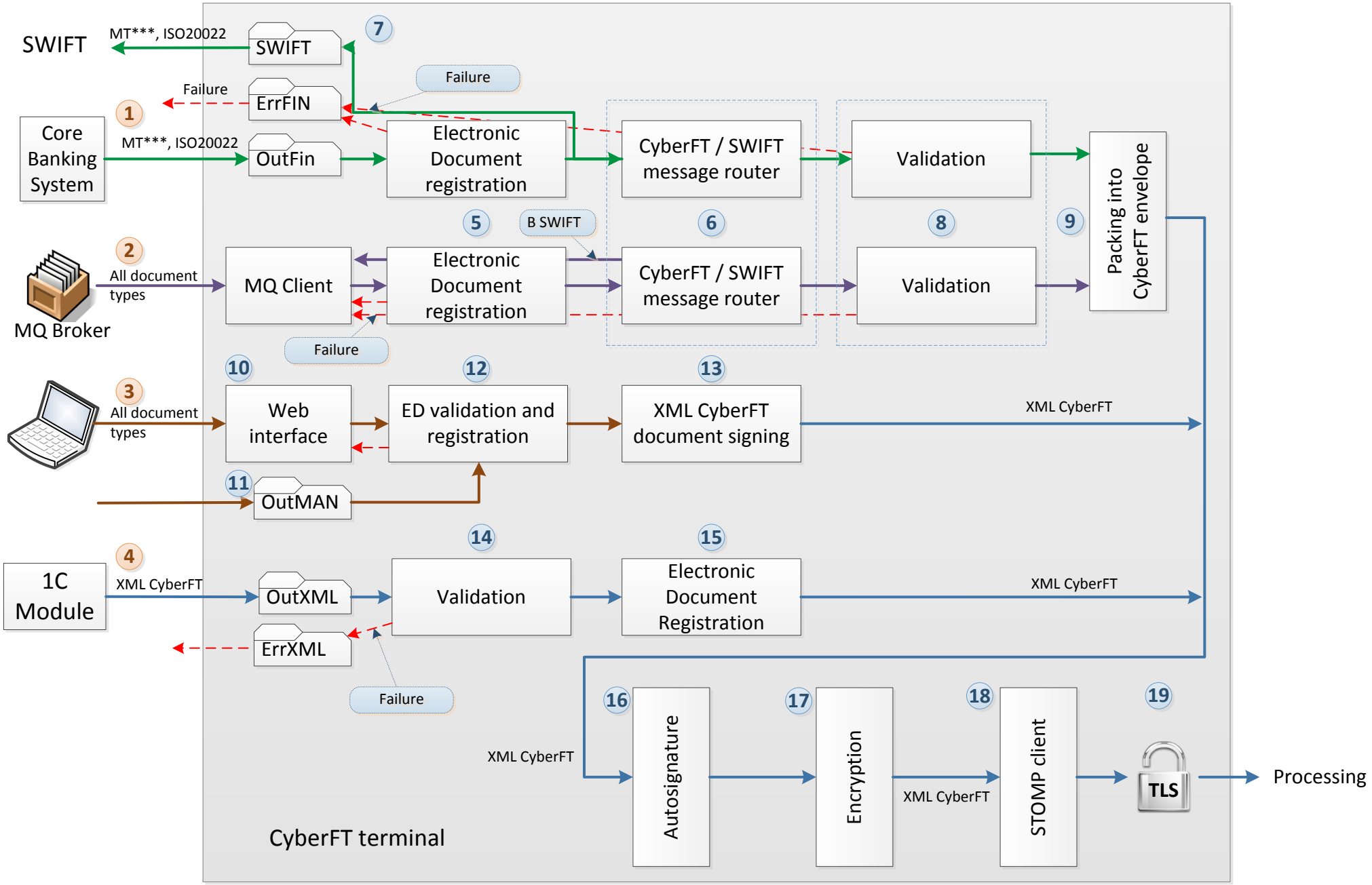
CyberFT terminal – documents log



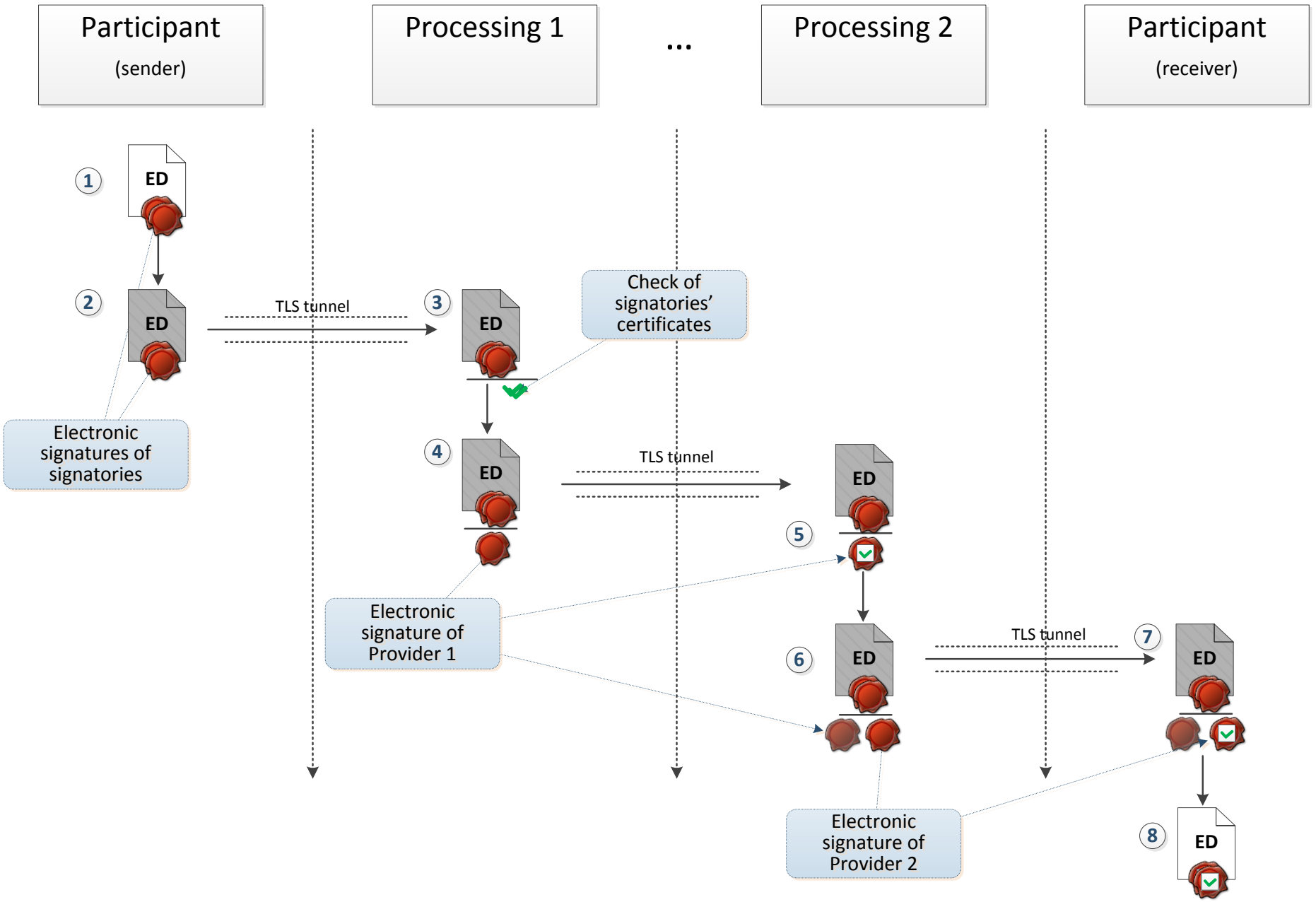
CyberFT terminal – working with documents



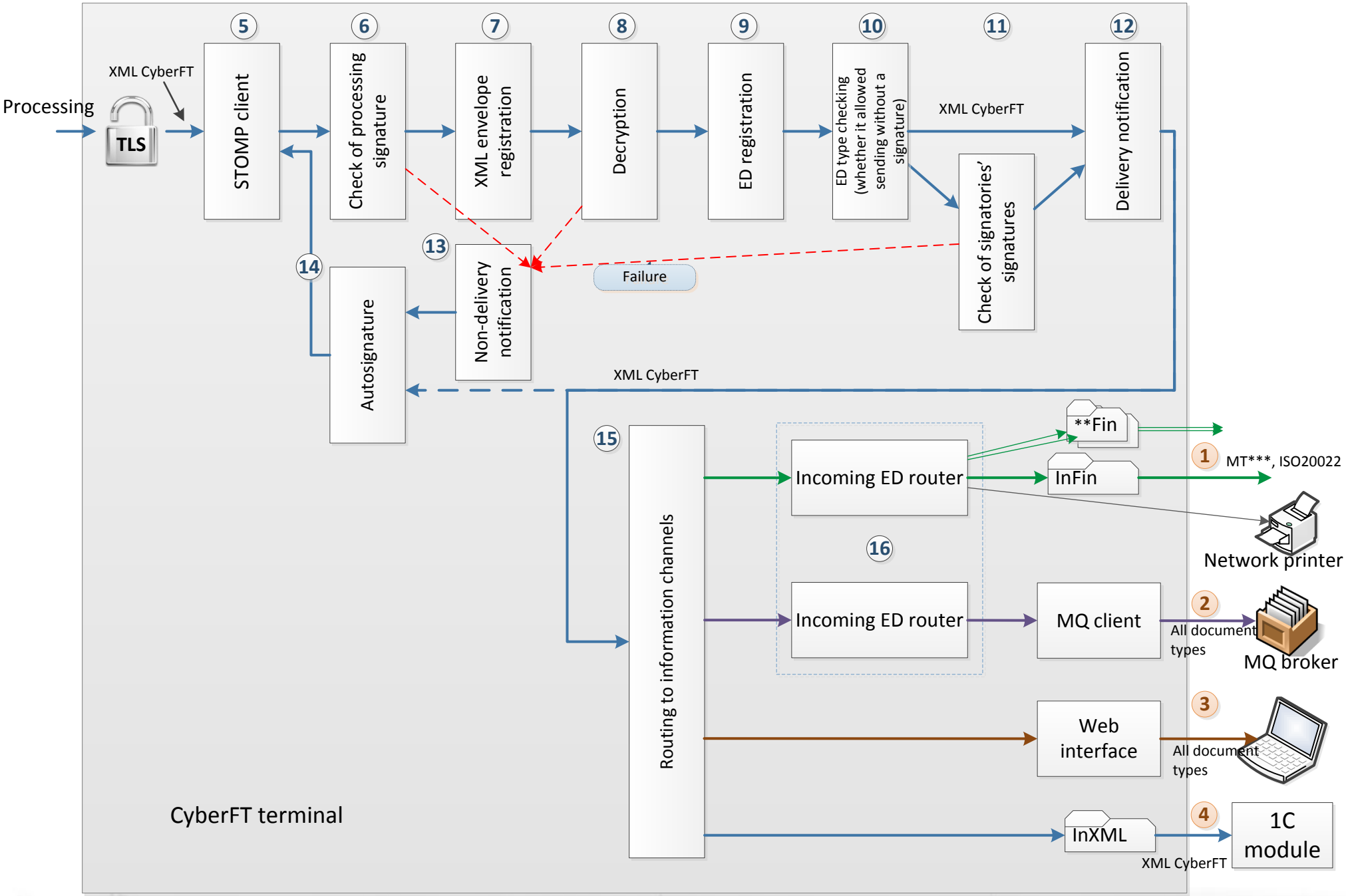
CyberFT terminal – documents sending



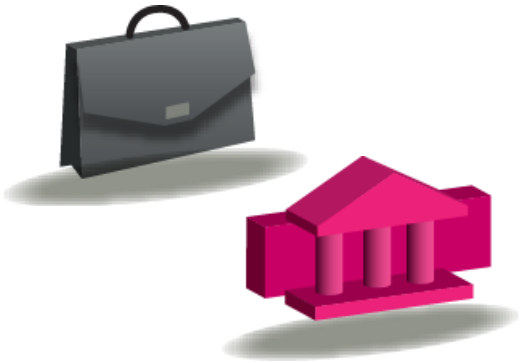
CyberFT terminal – documents processing



CyberFT terminal – documents receiving



CyberFT – legal and organization questions

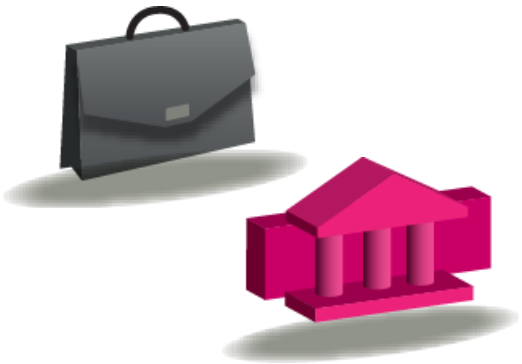


Participant

1. CyberFT Contract to be concluded
2. CyberFT Rules to be followed
3. Certificates exchange / certificates issuance at trusted center

CyberFT Provider

Step 1



Participant

1. E-banking / correspondent account / electronic interaction contract to be signed
2. Certificates exchange / certificates issuance at trusted center

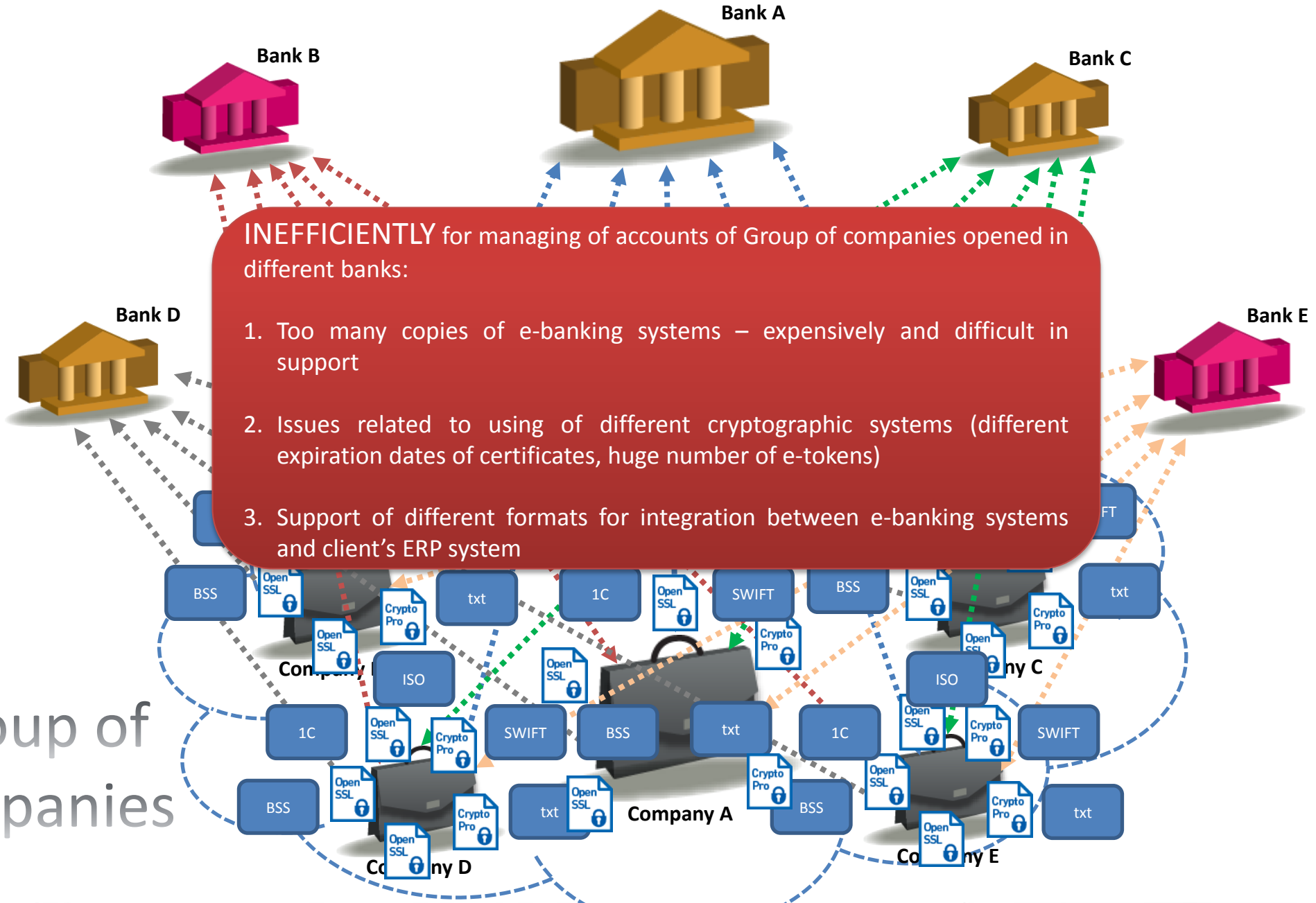
Participant

Step 2

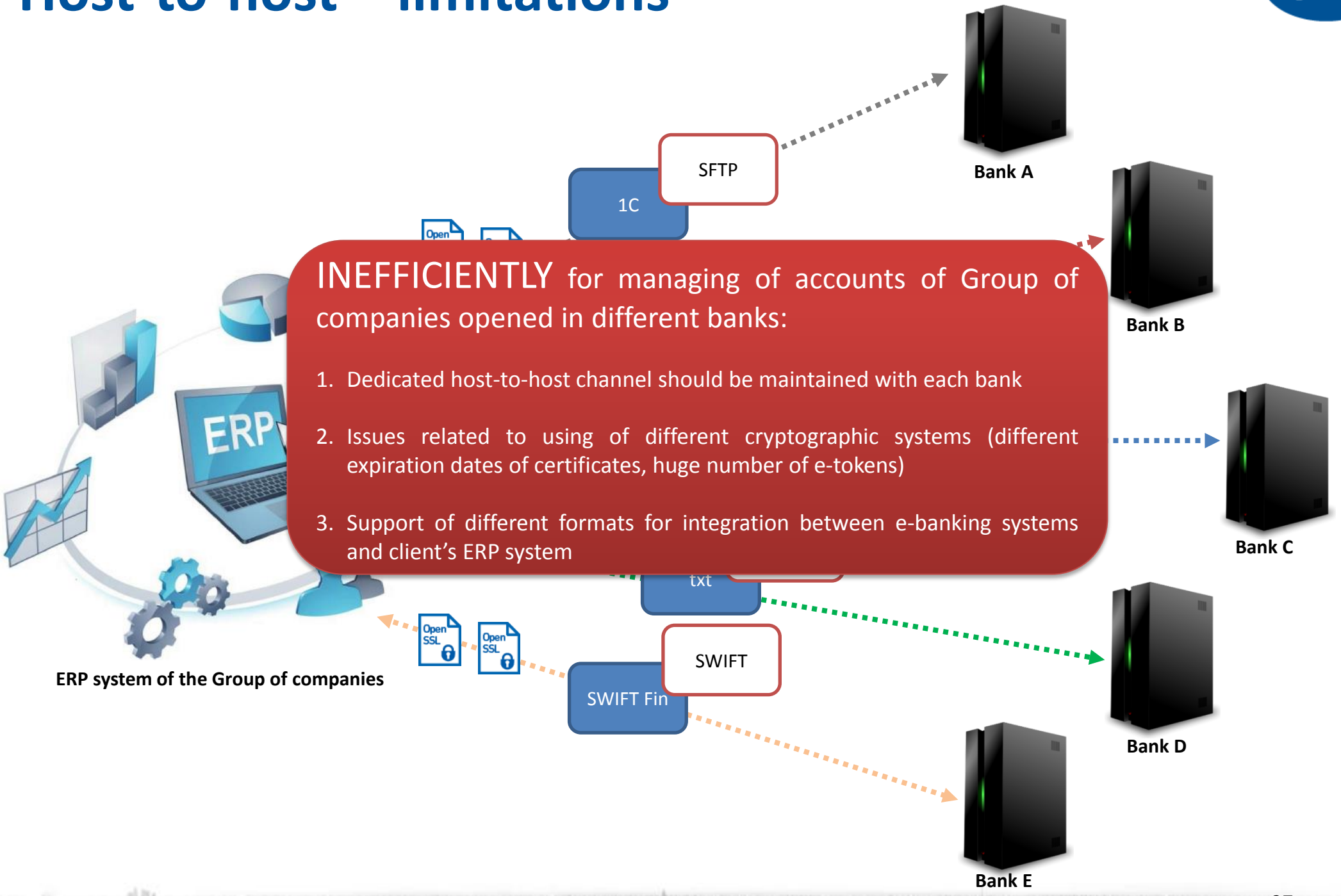
CyberFT – one system for multiple tasks

Universal solution for interaction between corporates customers and banks

E-banking systems - limitations



Host-to-host – limitations



INEFFICIENTLY for managing of accounts of Group of companies opened in different banks:

1. Dedicated host-to-host channel should be maintained with each bank
2. Issues related to using of different cryptographic systems (different expiration dates of certificates, huge number of e-tokens)
3. Support of different formats for integration between e-banking systems and client's ERP system

CyberFT – universal host-to-host solution

ISO20022

CyberFT

Bank A

Bank B

Bank C

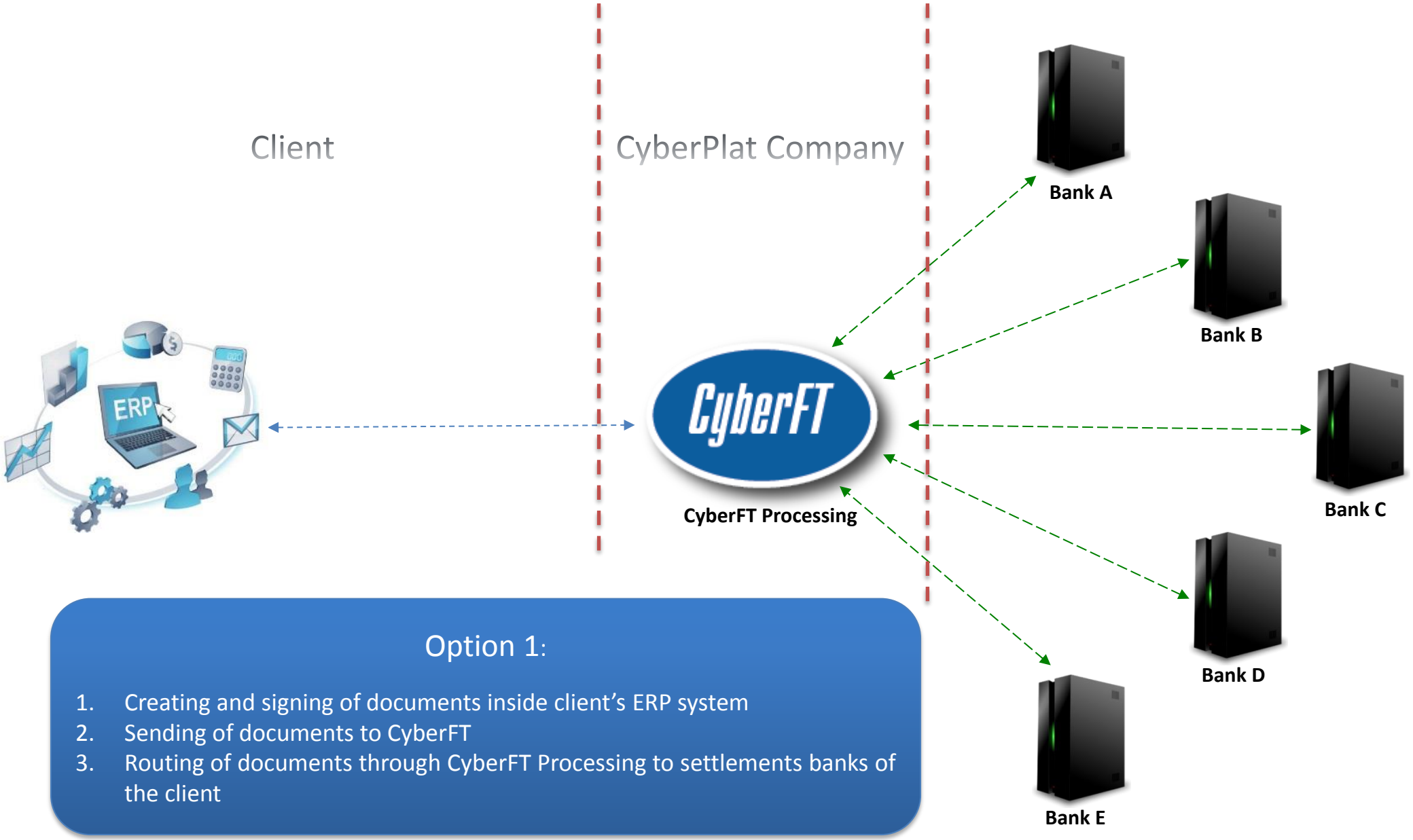
Bank D

Bank E

ADVANTAGES for the client:

1. Single channel for interaction with all banks
2. Using of unified formats
3. Possibility to apply single cryptographic means that can be got in trusted center
4. Low implementation and maintenance costs
5. High flexibility

CyberFT – working through ERP



Option 1:

1. Creating and signing of documents inside client's ERP system
2. Sending of documents to CyberFT
3. Routing of documents through CyberFT Processing to settlements banks of the client

CyberFT – working through ERP

Client

CyberPlat Company

CyberFT Terminal

CyberFT Processing

Bank A

Bank B

Bank C

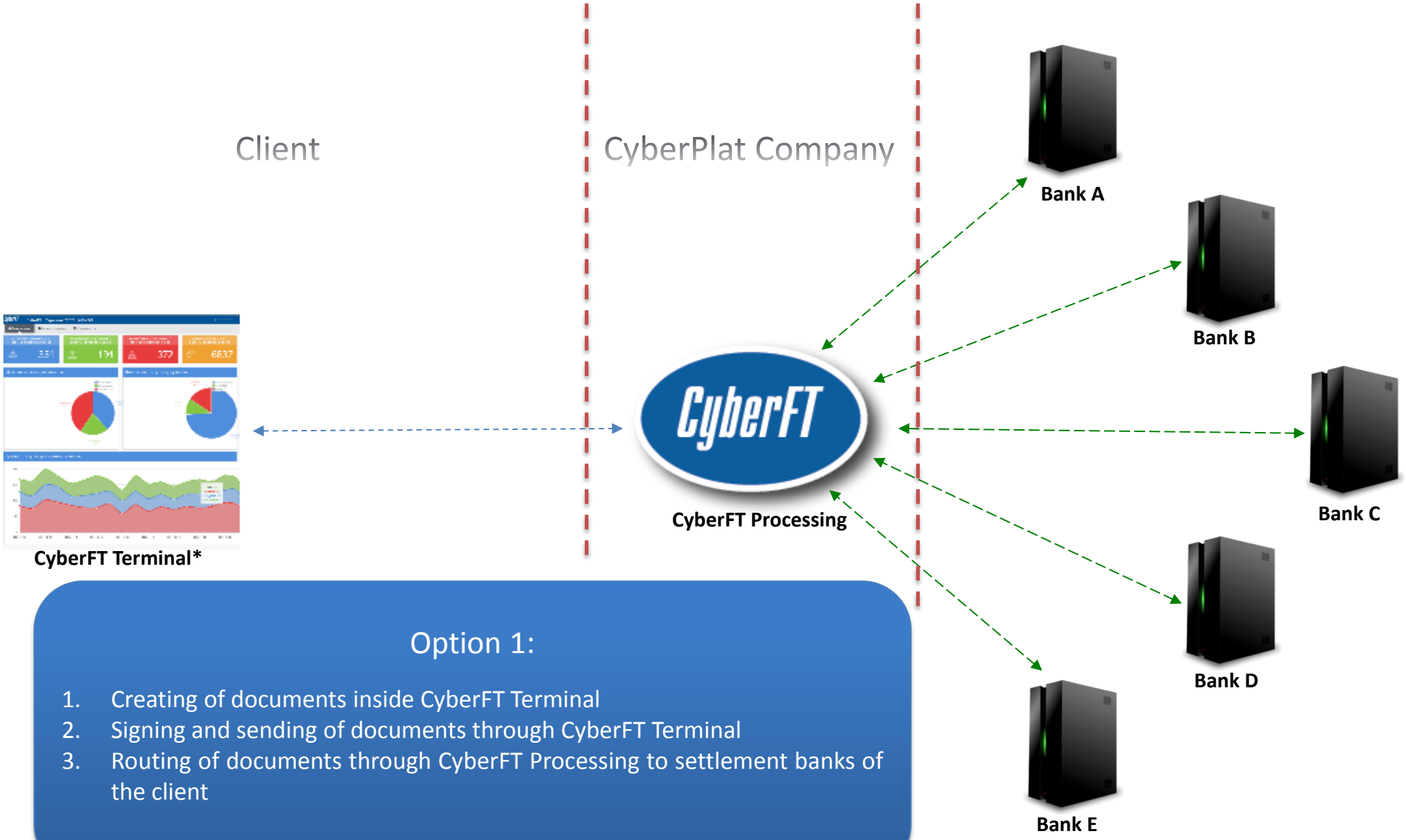
Bank D

Bank E

Option 2:

1. Creating of documents inside client's ERP system with further sending to CyberFT Terminal
2. Signing and sending of documents through CyberFT Terminal
3. Routing of documents through CyberFT Processing to settlement banks of the client

CyberFT – working through Terminal

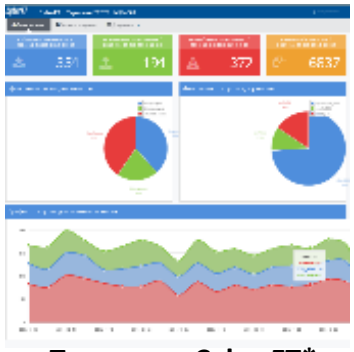


Option 1:

1. Creating of documents inside CyberFT Terminal
2. Signing and sending of documents through CyberFT Terminal
3. Routing of documents through CyberFT Processing to settlement banks of the client

***CyberFT Terminal can be installed as application on the client's side or can be used as full-fledged 'thin' web-client**

CyberFT – working through Terminal



Терминал CyberFT*

Банк A

Банк B

Банк C

Банк D

Банк E

Option 2:

1. Creating of documents inside CyberFT Terminal
2. Sending of documents is performed via channels provided by banks (e.g. SFTP, HTTPS, etc.)

*CyberFT Terminal can be installed as application on the client's side or can be used as full-fledged 'thin' web-client

Legally valid electronic documents interchange

Why EDI?

Only in Russia number of business transactions (paper-based invoices) is more than **15 Bn** deals per year

(According to Federal Tax Service of Russia)

Market correspondence in Russia is valued in **USD 1 Bn** per year (where **USD 500 Mio** are costs of corporates)

(According to BCG)

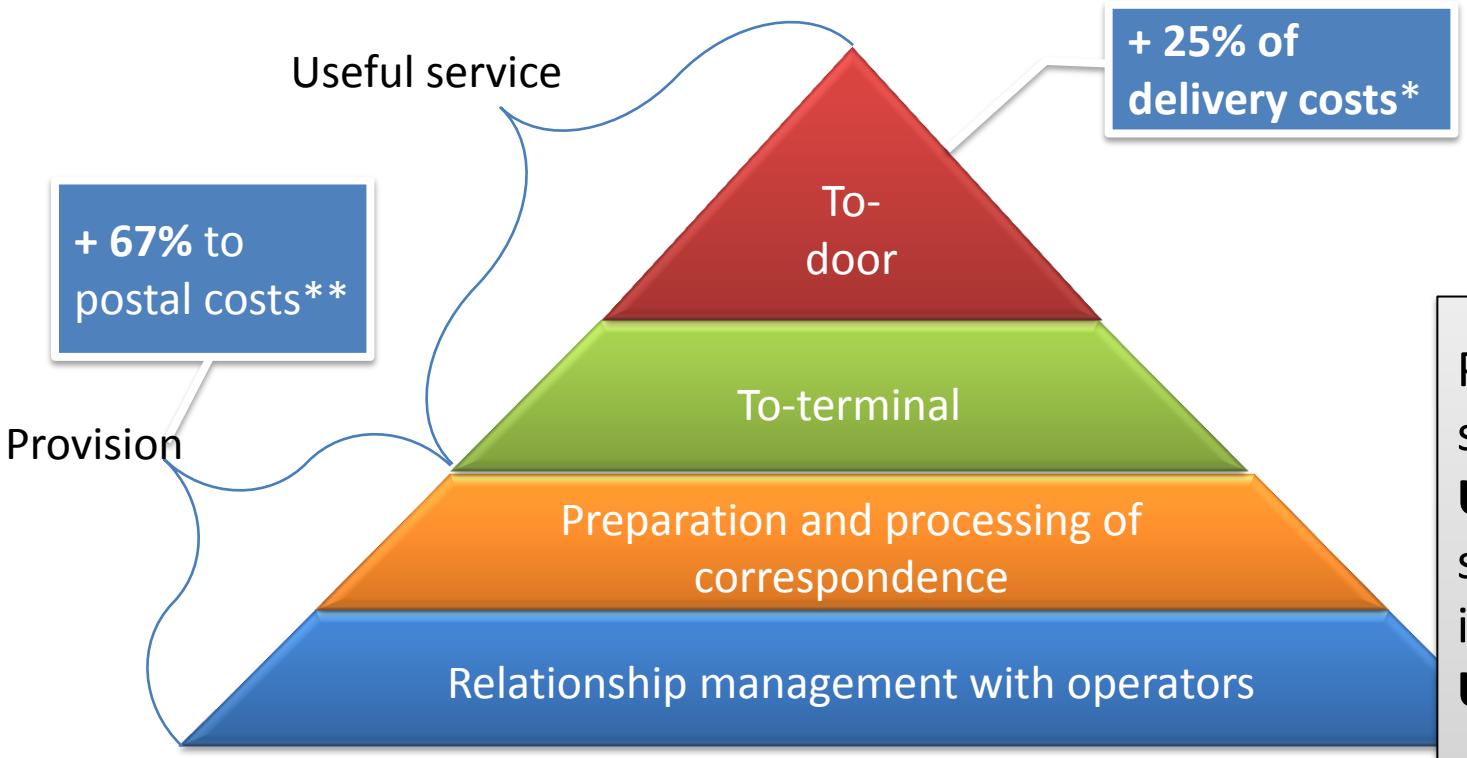
Costs for processing correspondence for corporate customer exceed postal costs in **3 times**,
thus overall correspondence costs for corporate customers exceed **USD 1.5 Bn** per year

(According to BCG)

Company (**TOP 400**) **can save** about **USD 400K** if only optimizes printing of documents

(According to GreenPrint, USA)

Why EDI?



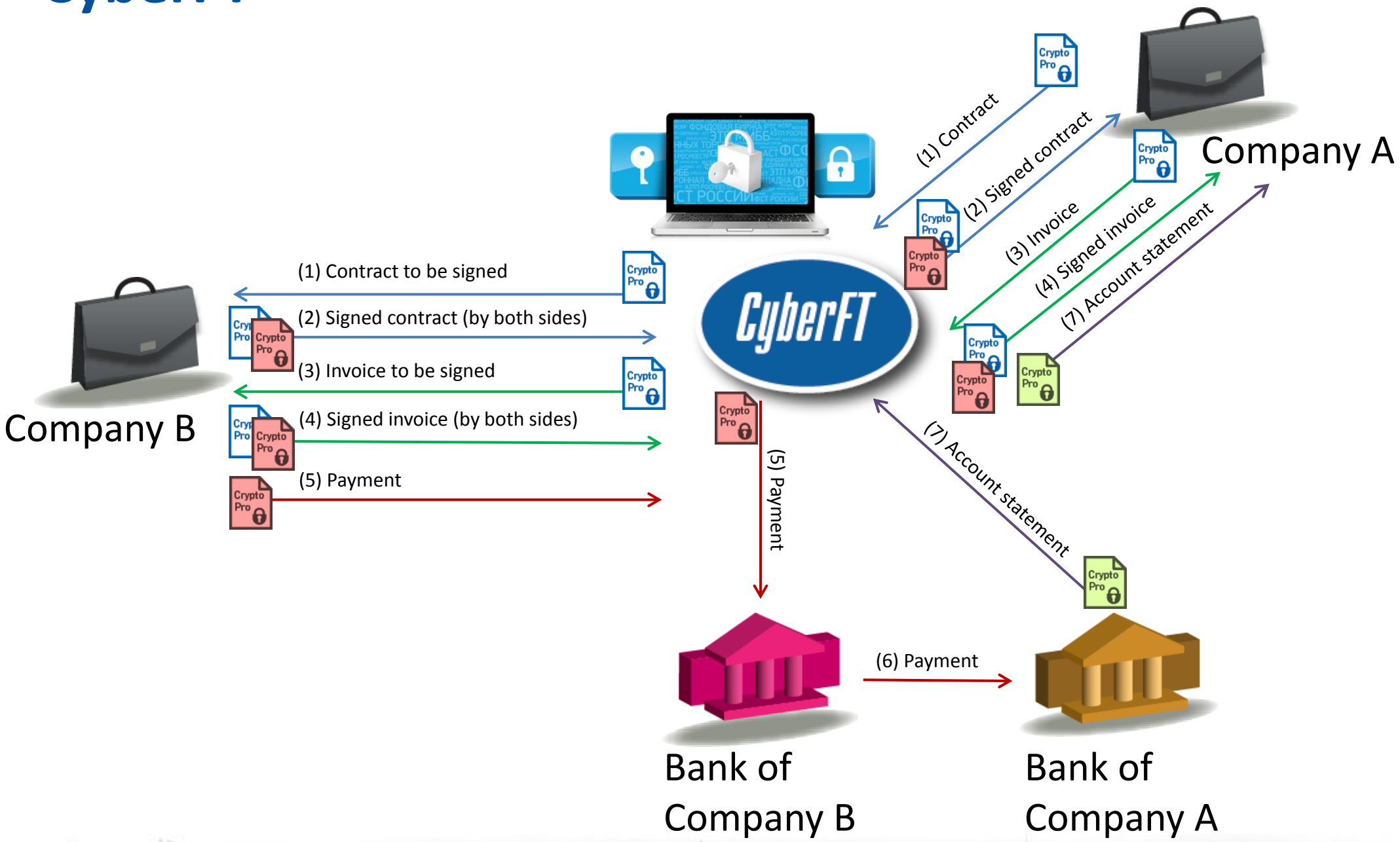
* According to standard tariffs of postal providers

** According to BCG

Processing of typical letter (3-5 sheets, A4 format) is about **USD 2** in average. If express mail service is used this cost will be in **10 times** more starting from **USD 35**.

(According to standard tariff of postal providers)

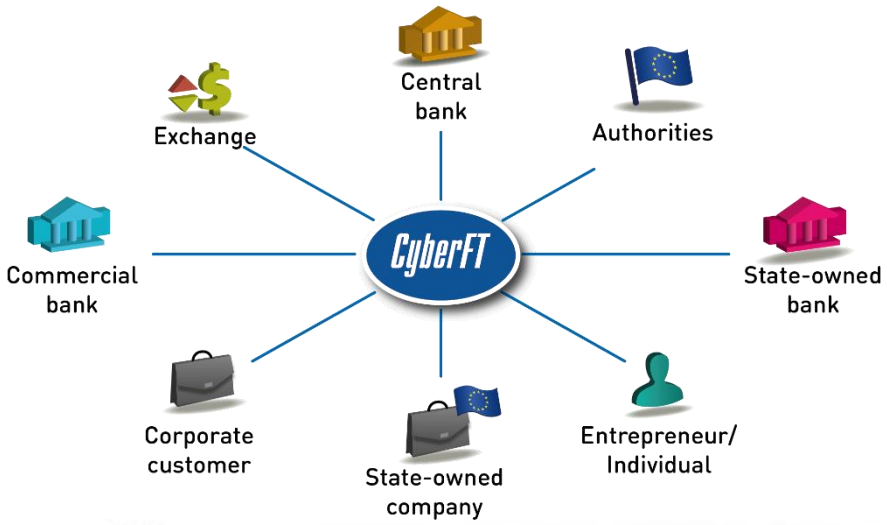
Legally valued EDI – example of interaction in CyberFT



CyberFT – participation examples

Basic participation

- Each party connects to CyberFT provider as a participant
- To start interaction both counterparties (sender and receiver) should exchange keys
- All transactions are stored on sender, receiver and provider ends



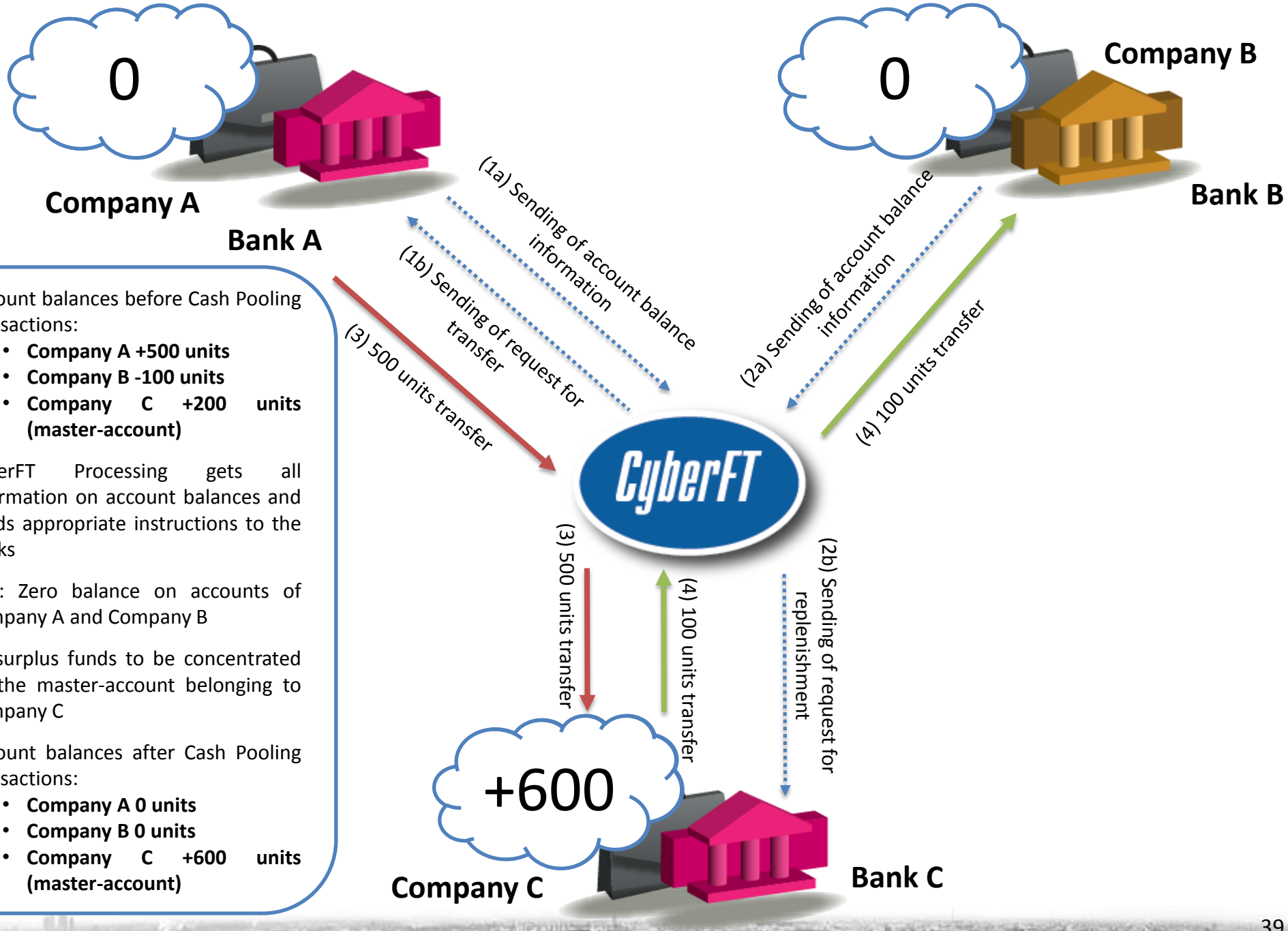
- Provider doesn't have access to transaction details
- 24/7 working hours (some limitations may take place according to the rules defined by provider)
- All transactions are processed online

Recommended for:

- ✓ Small banks
- ✓ Corporates
- ✓ Entrepreneurs
- ✓ Individuals

Interbank Cash Pooling?

Cash Pooling – example of interaction



1. Account balances before Cash Pooling transactions:
   - **Company A +500 units**
   - **Company B -100 units**
   - **Company C +200 units (master-account)**
2. CyberFT Processing gets all information on account balances and sends appropriate instructions to the banks
3. Aim: Zero balance on accounts of Company A and Company B
4. All surplus funds to be concentrated on the master-account belonging to Company C
5. Account balances after Cash Pooling transactions:
   - **Company A 0 units**
   - **Company B 0 units**
   - **Company C +600 units (master-account)**

CyberFT – software and hardware requirements

CyberFT Terminal software requirements

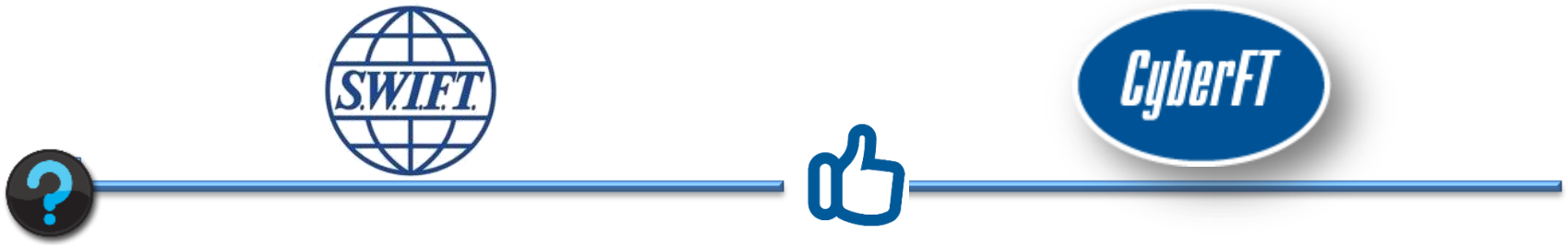
- Debian GNU / Linux 7.6 (wheezy) Release: 7.6
- File system ext3 and ext4
- Possibility to use virtual machine!

Users should have typical workstation/notebook and web-browser to work in CyberFT!

CyberFT Terminal hardware requirements

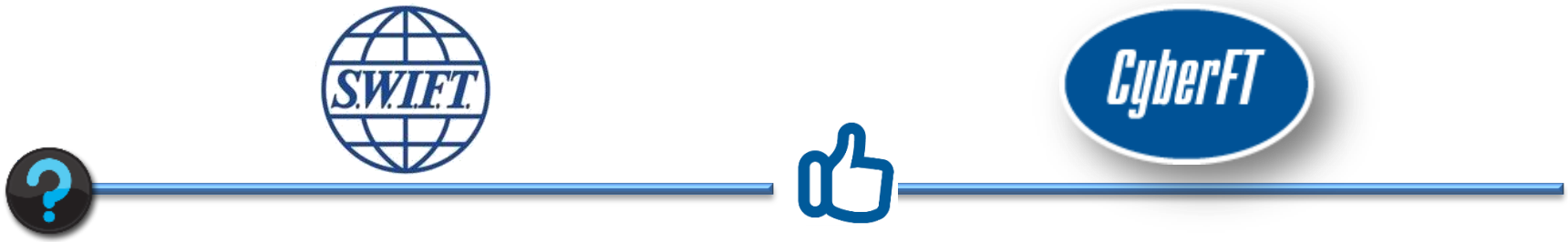
- Processor x86-64
- RAM not less 4Gb
- Multicore processor Intel Core 2 Duo 3.0 Ghz or higher
- HDD not less 40Gb

CyberFT vs. SWIFT



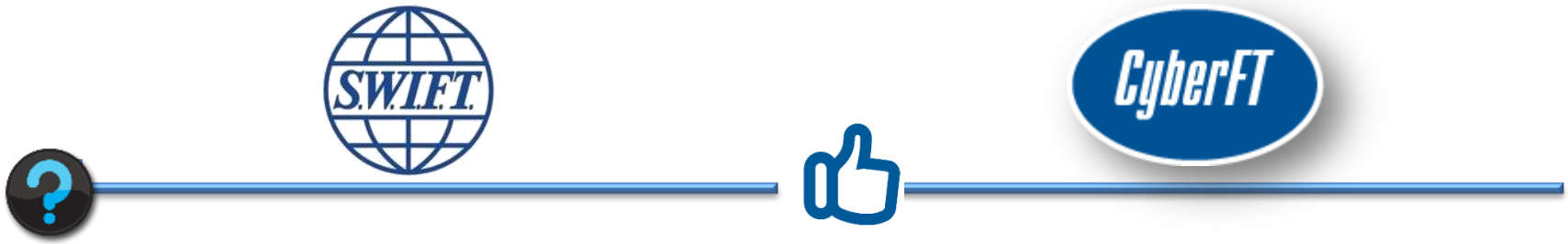
	SWIFT	CyberFT
Clients	About 10 000 banks and small number of corporate customers	Possibility to cover all banks and corporate customers without any limitations
Coverage	Whole world	Whole world
Conformity with legislation	Doesn't conform with local legislation of many counties (domestic transaction should be process inside country and don't leave country borders)	If full conformity with local legislation of the most countries
Operating hours	24*7	24*7
Implementation costs	No less than USD 53 000 including mandatory cabling from a specific communication service provider up to USD 200 000 for each new client.	Free of charge
Transaction costs	SWIFT FIN: Domestic transaction EUR 0.02 – 0.05, cross-border transaction EUR 0.03 – 0.18	No more than 50% from the SWIFT fee for the same transaction.
Maintenance costs	No less than EUR 10 000 per year	Free of charge

CyberFT vs SWIFT



	SWIFT	CyberFT
Implementation time	No less than 8 weeks in case of shared connection and at least 16 weeks in case of direct connection	Connection to CyberFT processing including integration with automated banking system takes from 1 to 3 weeks, and no more than 2 weeks in case of customer's own CyberFT platform implementation.
Data transfer speed	A few seconds	1.5 seconds
Data exchange formats	SWIFT Fin (MTXXX messages), InterAct (MX messages), FileAct (unstructured messages)	SWIFT Fin (MTXXX messages), InterAct (MX messages in accordance with ISO 20022), FileAct (unstructured messages with attachments), EDI documents (contracts, invoices) and more.
Maximum message size	No more than 10Mb	Standard maximum message size limit is 100 Mb. It can be easily increased according to customers' needs
User interface	Several versions of SWIFT Alliance software for full-fledged working	User friendly web-interface for full-fledged working
Additional services for corporate customers	Special conditions for corporate customers comparing to conditions for banks.	Special conditions for corporate customers, specialized 1C payment module, EDI service of legally valid documents.

CyberFT vs SWIFT

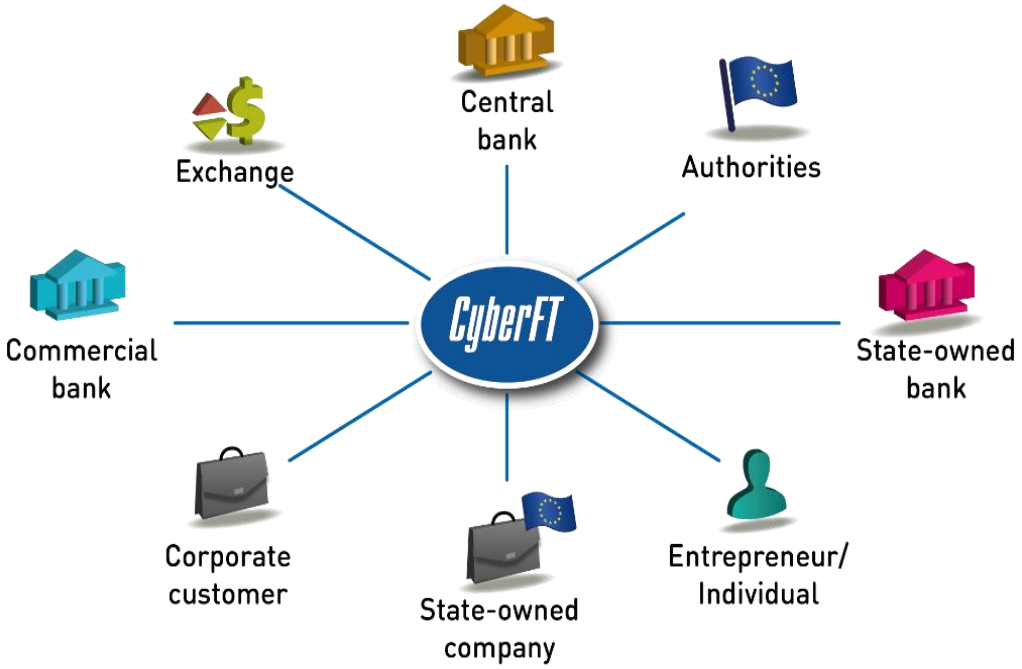


	SWIFT	CyberFT
Archive availability	Data is normally stored for only 4 months on the processing's side	All data is stored on participants' and processing's side without any limitations
Types of interaction	Processing only	Processing and clearing
Cryptography	SWIFT cryptographic means. No capability to change cryptographic means	Various cryptographic means (including OpenSSL, PGP and GOST algorithms based on CryproPro, Signal-COM, etc.) Support of any means of cryptographic protection. E-signature for electronic messages
Transactions security	Data is available to SWIFT	Data is not available to the CyberFT Provider
Servers location	USA, Switzerland and Netherlands	Russia and any part pf the world by the CyberFT Provider choice
Reliability	Specialized data exchange protocol and 'hot backup' of each network element. A total of 4 datacenters.total of 4 datacenters	Advanced and effective software and hardware measures (both technical and organizational) to provide high system reliability. Number of service providers is unlimited
Network topology	Star (all participants are connected to the single center)	Fully connected (there can be unlimited number of centers connected between each other where network participants are connected to these centers)

CyberFT – commercial proposal

Basic participation (when customer is connected to CyberPlat company as CyberFT Provider)

- CyberPlat Company owns CyberFT and is responsible for processing of the messages
- Connection to CyberFT via customer's own software or CyberFT Termonal
- Customer will be able to communicate with all parties connected to CyberFT Network

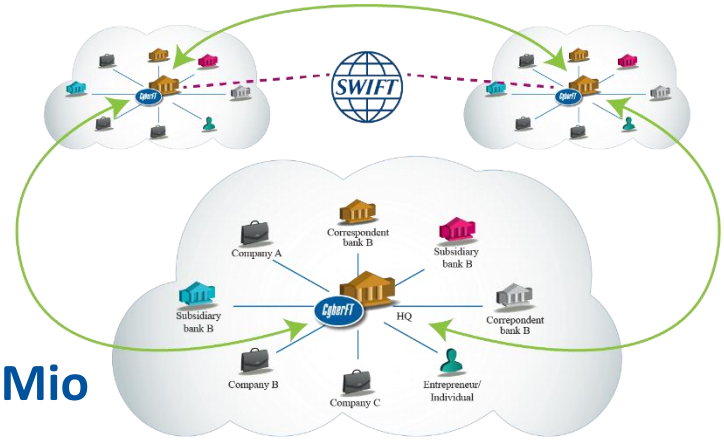


- ✓ Connection: **free of charge**
- ✓ Software price: **free of charge**
- ✓ Support: **free of charge**
- ✓ Transaction costs: 50% of the price of the similar SWIFT message (e.g. MTXXX **EUR 0.021** (local transactions) and **EUR 0.063** (cross-border transactions)

CyberFT – commercial proposal

Stand-alone implementation – full edition

- Customer integrates CyberFT Platform into its own datacenter and becomes full-fledged CyberFT Provider for its customers and counterparties
- CyberPlat Company doesn't have access to this platform
- Information on transactions **is not sent** to CyberPlat



✓ Hardware and CyberFT software for 2 server groups operating under GRID technology: one off fee **USD 10 Mio**

✓ Processing of up to 500K transactions per day. For higher number of transaction the price is subject to negotiations

✓ Client's software – **free of charge**

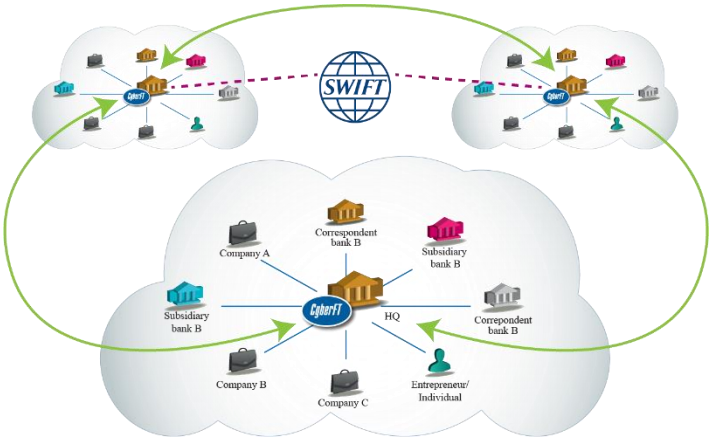
✓ Maintenance: **USD 200K annually**. In case of a special one-off fee, maintenance annual fee is subjects to negotiations

✓ Transfer costs: **free of charge**

CyberFT – commercial proposal

Stand-alone implementation – light edition

- Customer integrates CyberFT platform into its own datacenter and becomes full-fledged CyberFT Provider for its customers and counterparties
- Reserve datacenter is located at CyberPlat Company premises
- Information on transactions **is sent** to CyberPlat



✓ Hardware and CyberFT software for one processing: one off fee **USD 1 Mio**

✓ Processing of up to 500K transactions per day. For higher number of transaction the price is subject to negotiations

✓ Client's software – **free of charge**

✓ Maintenance: **USD 200K annually**. In case of a special one-off fee, maintenance annual fee is subjects to negotiations

✓ Transfer costs: **50% from SWIFT price** for the same message type

CyberFT – main advantages

- Significant costs reduction
- High security standards and full guarantee of information safety
- Fully compliant with requirements of local legislation of the most countries
- Fast and effective system implementation
- Various connection types
- 24x7 availability
- Full independence from political situation
- High fault-tolerance
- All transactions are processed online

- Up-to-date advanced platform with full support of SWIFT message types, ISO 20022 formats and many others
- Flexibility and scalability of the system (message formats, cryptographic means, channels, etc.)
- One system for different tasks (from closed banking group up to interaction on international level)
- Great possibility for banks to offer new services for their customers:
  - ✓ Online processing of transactions
  - ✓ Extended cut-off time
  - ✓ Electronic documents workflow with legal significance
  - ✓ Host-to-host service
  - ✓ Other services like e-invoicing
- ✓ Possibility for corporate customers to build Centralized Treasury and to use uniform channels, formats and cryptography to communicate with different banks
- ✓ Possibility to organize direct debit, e-invoicing, interbank cash pooling and other solutions

Conclusion

CyberPlat is willing to be your partner in providing up-to-date transactional and financial services through CyberFT Platform to optimize costs, increase efficiency and your level of competitiveness on the market.

The wide range of solutions and capabilities of CyberPlat Company exceeds the bounds of this presentation and we rely on the further collaboration for a better understanding and meeting all your requirements.

Feel free to submit your requests and questions!

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Thank you!