



# T2S connectivity

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# T2S Connectivity

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## Who are the “Directly Connected T2S Actors” or “DiCoAs”?

- **T2S is essentially a service offered to CSDs by the Eurosystem**
  - **All CSDs** need to be able to manage securities accounts on T2S, send settlement instructions to T2S and receive information from T2S
  - **All euro area Central Banks** need to be able to manage cash accounts in T2S
- **T2S also allows settlement of securities transactions in currencies other than euro**
  - **All non-euro area Central Banks** allowing their currency to be used in T2S will need to be able to manage cash accounts in T2S
- **CSD customers will typically access their securities accounts via their CSD, but they have the opportunity to have direct access to T2S if the CSD agrees**
  - **Some CSD customers** are expected to make use of this possibility and will need a connection to T2S
- **Cash account holders typically access their Central Bank cash accounts directly, but T2S allows them to manage liquidity on their accounts via the RTGS system**
  - **Some Central Bank customers** are expected to manage their liquidity directly

# General approach

- **Competition is the preferred way to ensure low connectivity costs for DiCoAs.**
- **Choice is the preferred way to ensure that DiCoAs can connect to T2S in a way that supports their individual business case.**
- **The number of connectivity solutions has to be limited in order to allow for a sound technical and operational management of the solutions, in particular from a business continuity perspective.**
- **All connectivity solutions will be available to all DiCoAs.**
- **The Eurosystem will offer two connectivity options to DiCoAs:**
  - **Via a Value-Added Network (VAN)**
  - **Via a Dedicated Link (DL)**

## What is the technical difference between a VAN and a Dedicated Link?

- **Both a VAN and a Dedicated Link consist of a physical connectivity layer and a set of “Value-added Connectivity Features”**
- **The difference between a VAN and a Dedicated Link is related to the “Value-added Connectivity Features”, such as:**
  - **Data exchange protocols (headers and trailers of messages and files, i.e. the “envelope” of the business content)**
  - **Security protocols (confidentiality, integrity, authentication, non-repudiation)**
  - **Messaging protocols (acknowledgements, resending)**
- **Using a VAN means that these features are provided by a Network Service Provider (NSP)**
- **Using a Dedicated Link means that these features are implemented in T2S and in the systems of the relevant DiCoAs**
- **The physical connectivity is (technically) always provided by a NSP**

## What is the business difference between a VAN and a Dedicated Link?

- **Compared to a VAN, there is no (or very limited) processing of information by the NSP for the Dedicated Link**
  - Data transmission between T2S and DiCoAs can go very fast (depending on the bandwidth chosen by the DiCoA).
- **The implementation costs for a VAN connection are lower than for a Dedicated Link:**
  - No internal costs for the implementation of value-added connectivity features in the own applications/infrastructure
- **The marginal costs for a Dedicated Link are lower than for a VAN:**
  - **Dedicated Link connections are typically charged on the basis of bandwidth (rather than on the basis of transmitted volumes), but:**
    - Dedicated links require more management efforts because they are configured and maintained as agreed with DiCoAs

# The VANs

- **On behalf of the Eurosystem, Banca d'Italia has (provisionally) awarded a licence to two NSPs, i.e. SWIFT and SIA-Colt**
- **Banca d'Italia will also sign the Licence Agreements with these two NSPs on behalf of the Eurosystem, who thereby obtain the right to connect DiCoAs to T2S**
- **DiCoAs using a VAN have to select one of these NSPs to connect their systems to T2S**
- **NSPs will either:**
  - Provide the same connectivity services to T2S and to the DiCoAs, or
  - Offer additional services to DiCoAs, possibly at extra cost, or
  - Agree with DiCoAs that they themselves implement some value-added connectivity features.
- **DiCoAs will not pay any connectivity fees to the Eurosystem, but will bilaterally negotiate such fees with – and pay them directly to – their NSP(s)**

# The Dedicated Link Solution

- The Value-added Connectivity features, to be implemented in T2S (by the Eurosystem) and in the DiCoAs' systems (by themselves), will be the same as for the VAN.
  - This avoids technical and operational risks related to building and managing different communication protocols.
  - This ensures fair competition with the VA-NSPs.
- As far as the physical connectivity is concerned, the Eurosystem has considered two alternative options:
  - The implementation of a T2S-specific solution
  - The usage of the internal Eurosystem network (CoreNet)

# The Dedicated Link Solution

- On 17 November 2011, the Governing Council has selected CoreNet as the network for the Dedicated Links in T2S, mainly for the following reasons:
  - CoreNet being an existing network, significantly reduces project risks
  - CoreNet allows a geographically neutral price setting
- The Dedicated Links (including the CoreNet service) will be priced at cost in full respect of competition law principles
- DiCoAs will be able to connect to any CoreNet access point (e.g. if they wish to make use of a proprietary network)
- The draft Dedicated Link Specifications have been published on 31 October 2011
- The Eurosystem is currently preparing the legal framework and a pricing proposal to allow DiCoAs to make their connectivity choice.

# Use of the Eurosystem network

- CoreNet is currently used for data and teleconference communication between EU Central Banks (and a few non-EU Central Banks and public international institutions).
- The CoreNet access points are distributed all over Europe.
- The (external) provider of physical connectivity for CoreNet will (technically) connect the data centres of the DiCoAs with one of these access points, under the (legal) responsibility of the Eurosystem.
- The Eurosystem will have to recover its (internal and external) costs related to the implementation and management of the dedicated links between T2S and the data centres of the DiCoAs.



Thank you for your attention

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