

A hand holding a glowing sphere with a grid overlay. The background is a light blue gradient with a grid of white lines and dots, suggesting a digital or network environment. The hand is positioned in the center, holding a glowing sphere. The grid lines are white and form a complex pattern of squares and rectangles. The dots are small white circles scattered throughout the background.

# Public Blockchains – can there be a System without a Controller? Blockchain and GDPR

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# Who is “Controller” and who is “Processor”?

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- Node operators?
- Miner who mines a specific block?
- All miners together?
- User who signs a transaction with her private key?
- Software developer?

# Art. 4.7 and Art. 4.8 GDPR

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- (7) 'controller' means the natural or legal person, public authority, agency or other body which, alone or jointly with others, **determines the purposes and means of the processing** of personal data; where the purposes and means of such processing are determined by Union or Member State law, the controller or the specific criteria for its nomination may be provided for by Union or Member State law;
- (8) 'processor' means a natural or legal person, public authority, agency or other body which processes personal data **on behalf of the controller;**

# What about the WP29 / EDPB?

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WP 169 (2010) (not endorsed by the EDPB)

The concept of controller is autonomous, in the sense that it should be interpreted mainly according to Community data protection law, and **functional**, in the sense that it is intended to allocate responsibilities where the **factual influence is, and thus based on a factual rather than a formal analysis.**

This calls for an interpretation of the Directive ensuring that the "determining body" can be easily and clearly identified in most situations, **by reference to those - legal and/or factual - circumstances from which factual influence normally can be inferred,** unless other elements indicate the contrary.

English: „controller“

French: «responsable du traitement»

German: „Verantwortlicher“

# European Court of Justice C-25/17








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However, a natural or legal person who exerts influence over the processing of personal data, for his own purposes, and who participates, as a result, in the determination of the purposes and means of that processing, may be regarded as a controller within the meaning of Article 2(d) of Directive 95/46.

Some factual influence is required, either legal or technical

# Is there factual influence?

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- Node operators 
- Miner who mines a specific block 
- All miners together  
- User who signs a transaction with her private key 
- Software developer  

## Opinion of the CNIL

# Controller on which level?

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## Blockchain level

Public Blockchains ↔ Permissioned Blockchains

## Smart Contract level

Immutable Smart Contract ↔  
Smart Contract controlled by a third party

## Transaction level

Users control the transaction they write

# Can there be a system without a controller?

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**Art. 5 GDPR**

## **Principles relating to processing of personal data**

2. The controller shall be responsible for, and be able to demonstrate compliance with, paragraph 1 ('accountability').

ECJ: C-131-12:

effective and complete protection of data subjects



# What serves the data subjects better?

## No data processing without accountability

- Data subject is forced to trust an intermediary
- There is always somebody accountable
- Risk of intermediary abusing the data



## Freedom to use peer-to-peer systems

- Data subject has the freedom whether she wants to trust an intermediary
- When no intermediary is selected, there might be a lack of accountability
- No risk of intermediary abusing the data

