

DOCUMENTING CONSENT

IPEN Frankfurt 2016-09-09 Torgeir Hovden - torgeir@signatu.com



ABOUT ME





TORGEIR HOVDEN

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MSc CS, MTM/MBA NTNU, MIT Sloan, NHH

PAST

Strategic Advisor, Mozilla CTO Telenor Digital Principal Engineer, Microsoft Sr. Director FAST

GDPR AND CONSENT



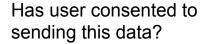
 Data Controller must be able to demonstrate that the data subject consents to the processing operation, according to the GDPR Article 7.1 and the Recital 42.

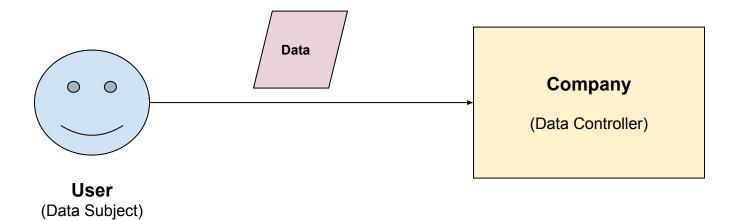
 The exercise of the data subject rights or enforcement of the privacy policy may depend on the ability produce evidence of consent

 Documentation of consent is needed for audit by DPA, certification bodies, authorities.

SCENARIO

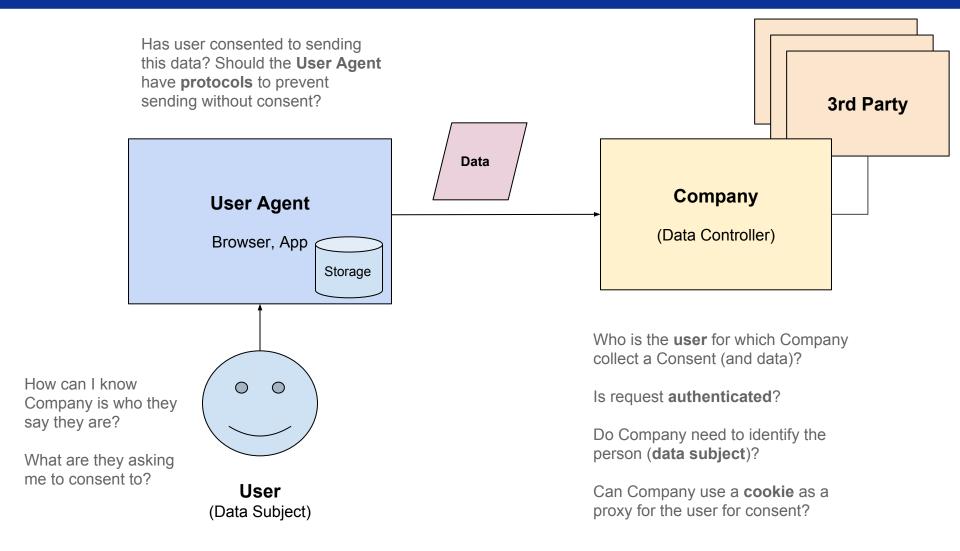






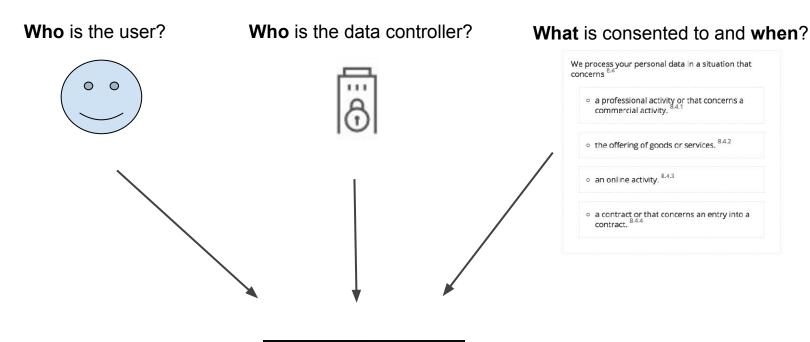
SCENARIO: MORE DETAIL





DOCUMENTING CONSENT







Tamper-proof storage of consent

WHO



Who is the user?

The **Data Subject** whose data is being processed.

We call this the **subject principal** claim, represented by a string or URI.

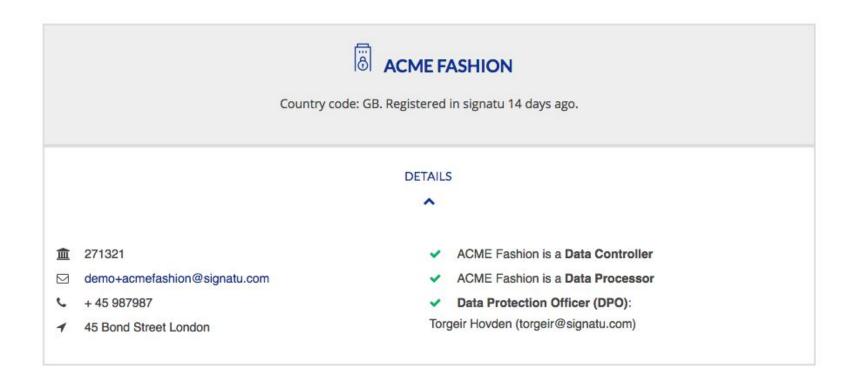
Who is the company?

The **Data Controller**, the entity who determines the purpose of the data processing.

We call this the **issuer principal** claim, represented by a string or URI.

WHO: COMPANY





How to properly verify the **Issuer Claim** - i.e., who is the **Data Controller** and thus legally responsible?

WHO: USER



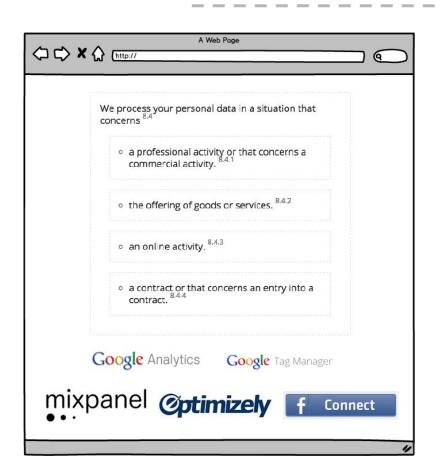
Examples of User Identity Claims

User Identity Claim	Туре	Claim Authenticated	Identity Verified
UIQT124RFGY	Cookie	Yes	No
Torgeir Hovden	Name / address	No	No
torgeir@signatu.com	E-mail identity	No	No
torgeir@signatu.com	E-mail identity	Yes	No
torgeir@gmail.com	E-mail identity	Yes, Google Login	Maybe
25127112345	Personal ID Number	Yes, BankID	Yes

WHAT: SCOPE OF CONSENT



granularity



WHY WE PROCESS DATA 1

We collect e-mail in EU for the purposes of marketing. 1.1

Specific purpose
Privacy by Design

WHAT: SCOPE OF CONSENT



- Consent scope
 - Represented by URI or string
- Consent scope must be immutable or contain a verifiable signature (e.g., ETags)

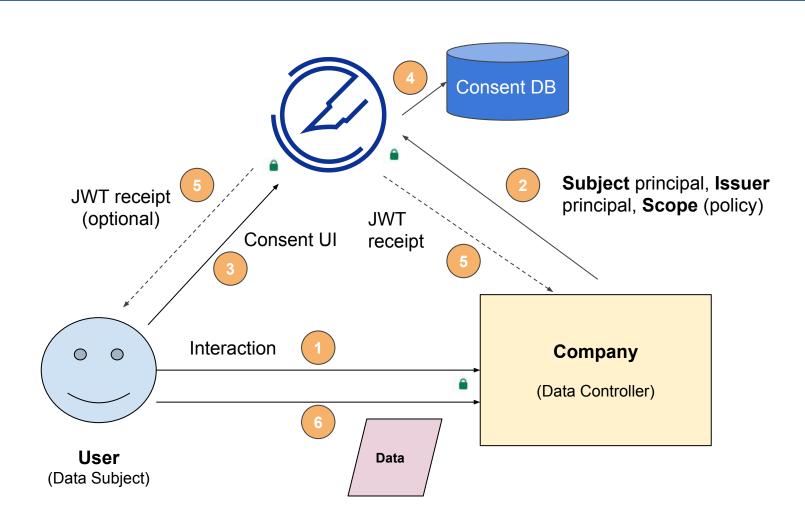
REALLY? PROVE IT!



- Key claims are issuer principal (iss),
 subject principal (sub), and scope (e.g., Privacy Policy)
- Signed JWT token (RFC 7519) with claims as a Consent Receipt
- Signatu stores the consent and the receipt

CONSENT USING SIGNATU





Signed JWT Token



> curl https://api.signatu.com/api/termsdocuments/169/ consents/219
[...]

"receipt": "eyJ0eXAi0iJKV10iLCJhbGci0iJSUzI1NiJ9.eyJqdXJpc2RpY3Rpb24i0iJubyIsInN1YiI6I nRvcmdlaXJAZXJpdHJldW0uY29tIiwic3ZjIjpbIkVyaXRyZXVtIEFTIiwiTmVyZ3kgUHJpdmFjeSBUZXJtcy JdLCJub3RpY2UiOiJodHRwczovL2FwaS5zaWduYXR1LmNvbS9hcGkvdGVybXNkb2N1bWVudHMvMTY5L2h0bWw dGVtcGxhdGU9dGVybXNkb2N1bWVudCIsInBvbGljeV91cmkiOiJodHRwczovL2FwaS5zaWduYXR1LmNvbS9h cGkvdGVybXNkb2N1bWVudHMvMTY5L2h0bWw dGVtcGxhdGU9dGVybXNkb2N1bWVudCIsImRhdGFfY29udHJvb GxlciI6eyJvbl9iZWhhbGYi0mZhbHNlLCJjb250YWN0IjoidG9yZ2VpckBlcml0cmV1bS5jb20iLCJjb21wYW 55IjoiRXJpdHJldW0qQVMiLCJhZGRyZXNzIjoidG9yZ2VpckBlcml0cmV1bS5jb20iLCJlbWFpbCI6InRvcmd laXJAZXJpdHJldW0uY29tIiwicGhvbmUiOiIrNDcgOTA5IDM0IDk5OCJ9LCJjb25zZW50X3BheWxvYWQiOnsi cHJpdmFjeSBwb2xpY3kiOiJhZ3JlZSIsInRlcm1zIG9mIHNlcnZpY2UiOiJhZ3JlZSJ9LCJwdXJwb3NlIjpbX SwicGlpX2NvbGxlY3RlZCI6eyJuYW1lIjoiVG9yZ2VpciIsImVtYWlsIjoidG9yZ2VpckBlcml0cmV1bS5jb2 0ifSwic2Vuc210aXZ1IjpbXSwic2hhcmluZyI6W10sImNvbnRleHQiOlsiYWN0aXZ1IHByaXZhY3kgcG9saWN 5IGNvbnNlbnQiXSwiYXVkIjoiIiwic2NvcGVzIjoiIiwic2lnbmF0dV90b2tlbiI6IkJIU0ZOQyIsInNpZ25h dHVfcHVia2V5IjoiaHR0cHM6Ly9hcGkuc2lnbmF0dS5jb20vc3RhdGljL3NpZ25hdHUtand0LnB1YiIsImlzc yI6Imh0dHBz0i8vYXBpLnNpZ25hdHUuY29tIiwianRpIjoiQkhTRk5DIiwiaWF0IjoxNDY0NzgzNTEzfQ.VrC F3mOOjV97MYM4WH6nKhXYYqZQ6AMmQLBWnEF31A7nlXKeqGllRJaSaq1tFWJoB1ylizGaGWIMcMVTPLQDSF6I JWubQR3ohG83ujKiIEHXe9ScZ95ekC8TOBl12KiqoAWamSVY38Jev-CLzdGUagxQpQMr4hso0prK7VxFwOsX8 xwL-2Nr C1rKvj9K0M-zOAcB-ZRsmJDOIV5G-bPXms88-SDiIDr932TYOA IRZk9VPABSFGJMseaX0skpp-f5 ckIBdbkG4KktL8YPfGZK5EUDPdcr147z03XLRAZrBVQ8adxfZk78KNDYEoIv0WdIoK4w1M56VPuBnyI88AYQ

VERIFYING THE RECEIPT





eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9

.eyJqdXJpc2RpY3Rpb24i0iJubyIsInN1YiI 6InRvcmdlaXJAZXJpdHJldW0uY29tIiwic3Z jIjpbIkVyaXRyZXVtIEFTIiwiTmVyZ3kgUHJ pdmFjeSBUZXJtcyJdLCJub3RpY2Ui0iJodHR wczovL2FwaS5zaWduYXR1LmNvbS9hcGkvdGV ybXNkb2N1bWVudHMvMTY5L2h0bWw_dGVtcGx hdGU9dGVybXNkb2N1bWVudCIsInBvbGljeV9 1cmkiOiJodHRwczovL2FwaS5zaWduYXR1LmN vbS9hcGkvdGVybXNkb2N1bWVudHMvMTY5L2h 0bWw_dGVtcGxhdGU9dGVybXNkb2N1bWVudCI sImRhdGFfY29udHJvbGxlciI6eyJvbl9iZWh hbGYiOmZhbHNlLCJjb250YWN0IjoidG9yZ2V pckBlcml0cmV1bS5jb20iLCJjb21wYW55Ijo iRXJpdHJldW0gQVMiLCJhZGRyZXNzIjoidG9 yZ2VpckBlcml0cmV1bS5jb20iLCJlbWFpbCI 6InRvcmdlaXJAZXJpdHJldW0uY29tIiwicGh vbmUiOiIrNDcgOTA5IDM0IDk50CJ9LCJjb25 zZW50X3BheWxvYWQiOnsicHJpdmFjeSBwb2x pY3ki0iJhZ3J1ZSIsInRlcm1zIG9mIHNlcnZ pY2UiOiJhZ3J1ZSJ9LCJwdXJwb3N1IjpbXSw icGlpX2NvbGxlY3RlZCI6eyJuYW1lIjoiVG9 yZ2VpciIsImVtYWlsIjoidG9yZ2VpckBlcml 0cmV1bS5jb20ifSwic2Vuc2l0aXZlIjpbXSw

```
HEADER: ALGORITHM & TOKEN TYPE
   "typ": "JWT",
   "alg": "RS256"
PAYLOAD: DATA
   "jurisdiction": "no",
   "sub": "torgeir@eritreum.com".
   "svc": [
     "Eritreum AS",
     "Nergy Privacy Terms"
   1,
   "notice":
 "https://api.signatu.com/api/termsdocuments/169/htm
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   "policy_uri":
 "https://api.signatu.com/api/termsdocuments/169/htm
 1?template=termsdocument",
   "data_controller": {
     "on_behalf": false,
     "contact": "torgeir@eritreum.com",
     "company": "Eritreum AS",
     "address": "torgeir@eritreum.com",
     "email": "torgeir@eritreum.com",
     "phone": "+47 909 34 998"
   "consent_payload": {
     "privacy policy": "agree",
     "terms of service": "agree"
```

Other JWT as Consent Receipts





"The Kantara Consent Receipt Specification is for proof of consent, and uses signed JWT tokens and a common format for creating a consent record."

Currently tested by **MyData Finland** Gov project and as a **Digital Catapult** project in UK.







Org. No: 915 331 661 Foretaksregisteret



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