

Engaging Content
Engaging People

A World
Leading SFI
Research
Centre



Data Privacy Vocabulary (DPV)

Harshvardhan J. Pandit

IRC Postdoctoral Research Fellow

HOST INSTITUTION



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

HOST INSTITUTION



PARTNER INSTITUTIONS



University College Dublin
An Coláiste Ollscoile, Baile Átha Cliath
Ireland's Global University



MTU
Ollscoil Teicneolaíochta na Mumanhan
Munster Technological University



Maynooth University
National University
of Ireland Maynooth



OÉ Gaillimh
NUI Galway

FUNDED BY:





- PhD: GDPR x Semantic Web x Provenance → [ADAPT Theme-E / EPWG](#)
 - 2016 - 2020 :: Data Governance, Legal Compliance, GDPR
 - Vocabularies, Ontologies → Representation, Querying, Validation^d
 - Open Sourced all work and resources <http://openscience.adaptcentre.ie/>
- Focus:
 - Machine-readability - automation, interpretation, checking, verification
 - Interoperability - use it across systems, platforms, services, vendors, organisations
 - Standards - stability, agreement, commonality, interoperability
- Outcomes:
 - GDPRtEXT^a: taxonomy of GDPR, expose legislation as linked data
 - GDPRov^b: provenance of activities related to personal data and consent
 - GConsent^c: ontology for information related to consent based on GDPR

^a GDPRtEXT <https://w3id.org/GDPRtEXT/> "GDPRtEXT - GDPR as a Linked Data Resource" Pandit et al. (2018) https://doi.org/10.1007/978-3-319-93417-4_31

^b GDPRov <https://w3id.org/GDPRov> "Queryable Provenance Metadata For GDPR Compliance" Pandit et al. (2018) <https://doi.org/10.1016/j.procs.2018.09.026>

^c GConsent <https://w3id.org/GConsent> "GConsent - A Consent Ontology based on the GDPR" Pandit et al. (2019) https://doi.org/10.1007/978-3-030-21348-0_18

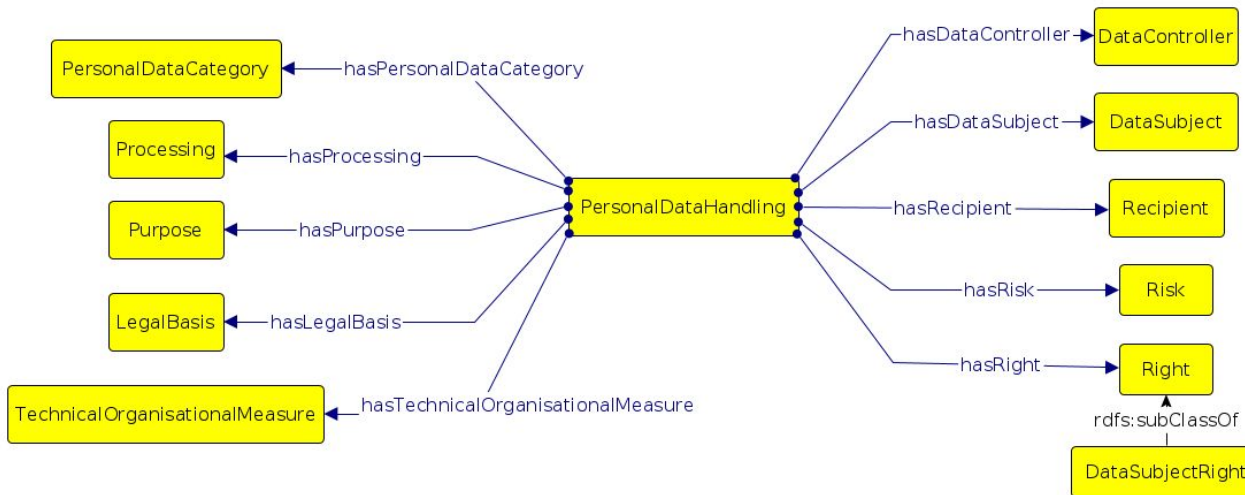
^d "Test-driven Approach Towards GDPR Compliance" Pandit et al. (2019) https://doi.org/10.1007/978-3-030-33220-4_2



- DPVCG is: a community of practitioners from various domains: legal, research, industry, privacy, academic, authorities
 - Started in 2018 under the EU H2020 SPECIAL Project (2017 - 2019)
 - **Joined as a Member in Sep 2018 with support from ADAPT as part of PhD research undertaken regarding GDPR compliance**
- DPVCG creates a common vocabulary for specifying information about how personal data is processed and used based on GDPR
- Current responsibilities:
 - Co-Chair (since Jan 2020)
 - Author / Maintainer of deliverables



- v0.1 consisted of:
 - Personal data categories
 - Purposes
 - Processing categories
 - Technical and organizational measures
 - Legal Basis, including consent
 - Recipients, data controllers
- v0.2 (Jan 2021) extends with: Rights, Risks



Ongoing Work

- Technologies - databases, encryption, etc.
- Risk Management** ← **IRC fellowship^b**
 - 2021-22 individual award
 - Express risk using DPV
 - Enable exploration of risks
 - Automate PIA / DPIA
- Guidelines / Standards - ISO, etc.
- Legal bases
- Consent Records** ← **NGI TRUST funding^c**
 - Create specification for consent
 - Verifiable, transparent, accountable
 - Implementations and Protocols

^a "Creating A Vocabulary for Data Privacy". Pandit and Polleres et al. https://doi.org/10.1007/978-3-030-33246-4_44
^b RISKY: Exploring privacy risks of technologies using knowledge graphs <https://harshp.com/research/projects/risky>
^c Privacy as Expected: Consent Gateway project <https://privacy-as-expected.org/>



1. Academic: **DPV is the most comprehensive vocabulary within the SotA**
2. Industry:
 - a. Thomson Reuters
 - b. Deutsche Telekom AG
 - c. PROXIMUS
 - d. Signatu AG
3. Personal Involvement:
 - a. Feedback to ISO/IEC WG in Privacy Engineering e.g. 27560 Consent Record
 - b. Kantara Initiative: Consent and Personal Data Receipts
 - c. Career-defining work as author of DPV and chair of DPVCG**
4. Future Efforts:
 - a. Increase industry adoption through tools and documentation
 - b. Encourage research & development of interoperable solutions
 - c. Propose standard adoption to EU ISA² Programme



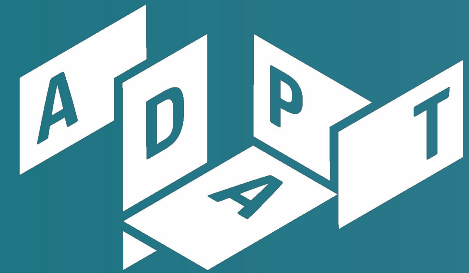
- PhD Mar 2016 -- May 2021
- Funding awards
 - IRC Research Fellowship (2 years): Oct 2020 -- Sep 2022
 - NGI TRUST (H2020) Project (6 months): Oct 2020 -- Jun 2021
- Freedom for exploring networks and opportunities
 - Legal data → EU Datathon (1st place) → EU Publications Office
 - Join DPVCG → Author/Editor of DPV → Co-Chair
 - Join NSAI & ISO WG → Contribute to 27560 standard on Consent
- Research Supervision & Teaching
 - Taught Concurrent System to Third Year Undergraduate (CompSci)
 - Supervising Undergraduate & MSc Projects ; Mentor PhD Students
- Organisation and Activities:
 - Chair for LegalTech track at SEMANTiCS conference (Sep'20, Oct'21)
 - Chair for CONSeNT workshop at Euro Security & Privacy (Oct'21)
 - Chair of W3C Consent Community Group (formed 2021)

Data Privacy Vocabulary (DPV)

Harshvardhan J. Pandit

harshvardhan.pandit@adaptcentre.ie
@coolharsh55

www.adaptcentre.ie



Engaging Content
Engaging People

FUNDED BY:



Ireland's European Structural and
Investment Funds Programmes
2014-2020
Co-funded by the Irish Government
and the European Union



European Union
European Regional
Development Fund

