

AVefi Workshop 3

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Persistent Identifier
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Persistente Identifikatoren (PID)

- Ähnlich wie im Betriebssystem zur stabilen Referenzierung von Daten-Objekten
- Verwaltung der Referenz ist Aufgabe des PID Eigentümers
- Änderungen URLs/URIs können abgefangen werden
- Prozesse auf Daten können durch PIDs gesteuert werden

PID, aber welche?

IGSN International Generic Sample Number	Zbl zbMATH Open document ID	Wikidata Wikidata	COL Catalogue of Life
nanopub Nanopublications	urn:nbn:nl URN-NBN-NL.	epic epic (21.*).	orcid ORCID Identifier.
GDS_ID The Gene Expression Omnibus (GEO) DataSets Identifier	swMATH swMATH ID.	epic_old epic old (5 digit ex 11500).	LCCN Library of Congress Control Number
zbMATH zbMATH author ID	PRIDE Proteomics Identifier	LDC The Linguistic Data Consortium	GND German National Library
GDZ The Göttingen Digitization Center (GDZ)	urn:nbn:ch URN-NBN-CH.	ROR Research Organization Registry.	urn:nbn:de URN-NBN-DE.
ISBN International Standard Book Number	dbGaP The database of Genotypes and Phenotypes (dbGaP)	arXiv arXiv.	CVCL Research Resource Identifiers: Cellosaurus Vocabulary Cell Line
urn:nbn:fi URN-NBN-FI.	ark ARK alliance.	ISAN International Standard Audiovisual Number	swh Software heritage persistent identifiers.
dbVar dbVar ID	EAN13 European Article Number	InChiKey International Chemical Identifier	10.5281/zenodo Zenodo.
PMCID PubMed Central® (PMC) ID	ISNI International Standard Name Identifier	PubMed PubMed Identifier	ISSN International Standard Serial Number
ZB_Pub Zoo Bank Publication Identifier	ScopusAuthorID Scopus Author Identifier	DID Decentralized identifiers	Bibcode Bibliographic code

EU Ebene

- FAIRCORE4EOSC
 - Technische Entwicklung
 - Kerndienste für die EOSC, u.a.
 - PIDMR: PID Meta Resolver
 - DTR: Data Type Registry
 - CAT: Compliance Assessment Toolkit
- FAIR-Impact
 - Policies u.a. zu PIDs
- EOSC
 - A Persistent Identifier (PID) policy for the European Open Science Cloud (EOSC)
 - Von 2020, neue Version in Arbeit

PIDMR: One Place to Resolve all Persistent Identifiers



WHAT?

metadata

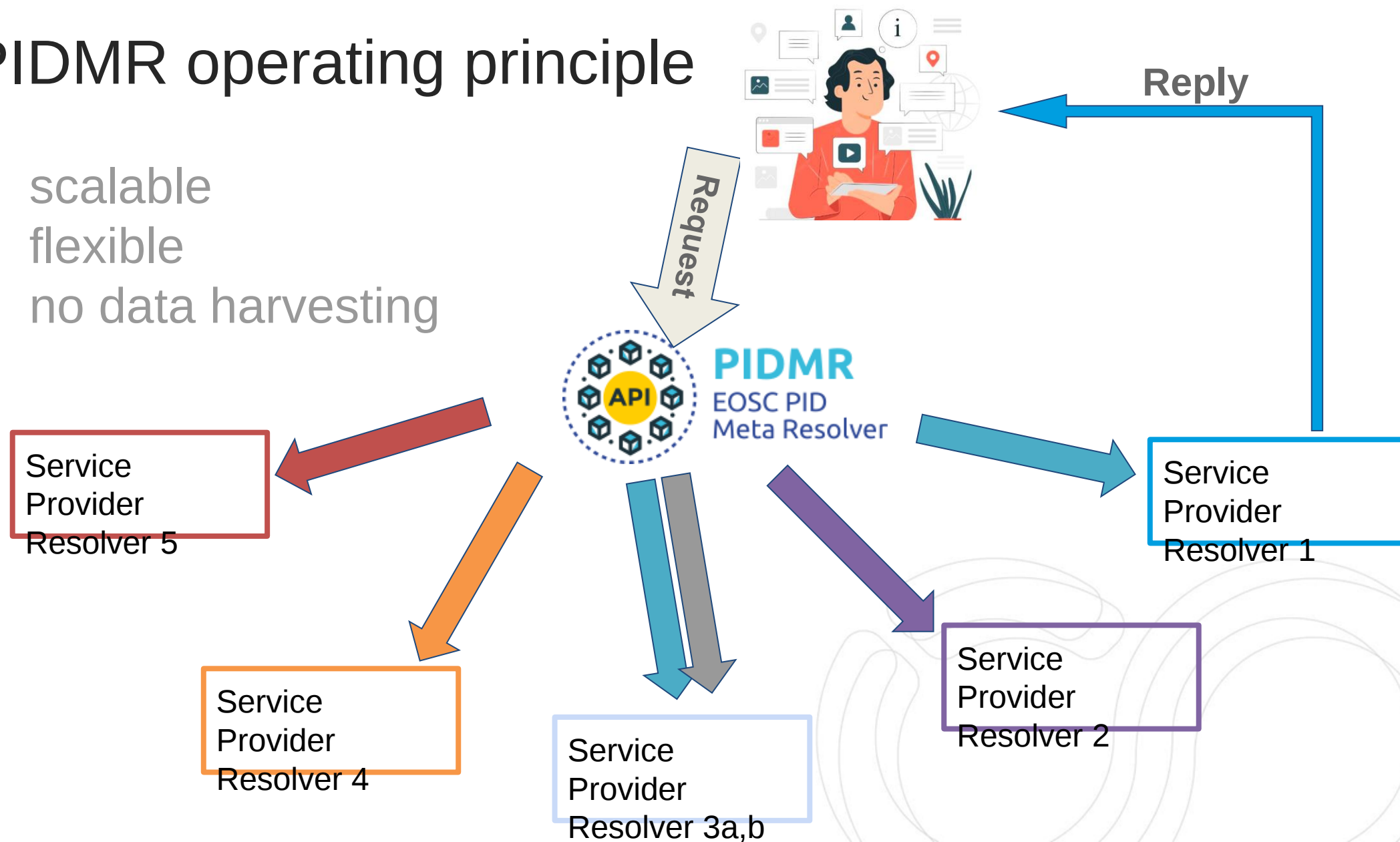
resource

landing page

and more

PIDMR operating principle

- scalable
- flexible
- no data harvesting



Nationale Ebene

- PID Network Deutschland (DFG gefördert)
- PID4NFDI
 - ein Projekt der BASE4NFDI
 - 2. Phase seit Januar 2025
 - Bereitstellung eines Service Hubs
 - Vergabe von Namensräumen
 - Consulting
 - Metadatenqualität Prüfung
 - Integration der EU Dienste



EU Ebene II

- Bildung von Knoten (Nodes) zur Verbesserung der Service-Landschaft
- Erster Knoten EUOSC EU Node (gestartet Oktober 2024)
 - Vertrag mit der EU zur Lieferung von Diensten
 - Datentransfer, Virtuelle Maschinen, Interaktive Notebooks
 - darunter auch PIDs
- Weitere Knoten im Gespräch / Aufbau
 - NFDI als nationaler Knoten
 - PID4NFDI

International FDO Forum

- FDO Forum
 - Was sind FAIR Digital Objects
 - Wie kann man FDOs implementieren
- PIDs sind zentraler Bestandteil von FDOs
 - Welches PID System eignet sich dazu
- FDOs aktuell stark diskutiert, verschieden Ausrichtungen:
 - Nanopublications
 - RO-Creates
 - Sign-Posting
 - Handle (PID) basiert

A FDO is ...



Well know visual impression.

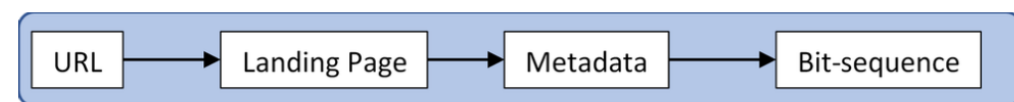
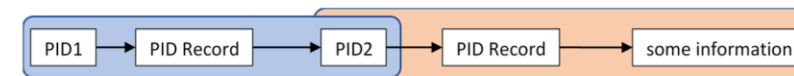
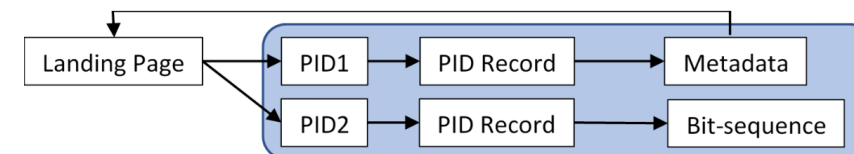
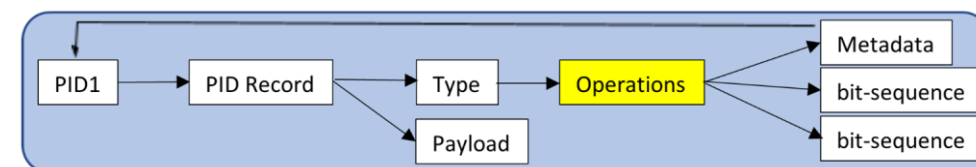
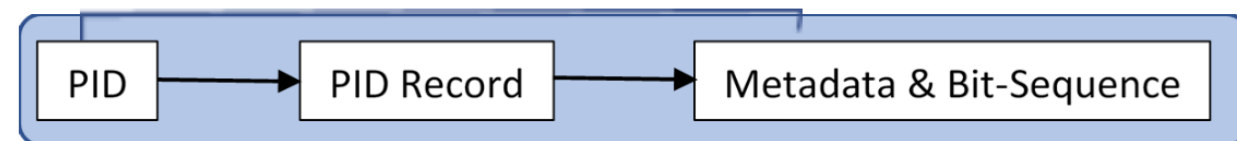
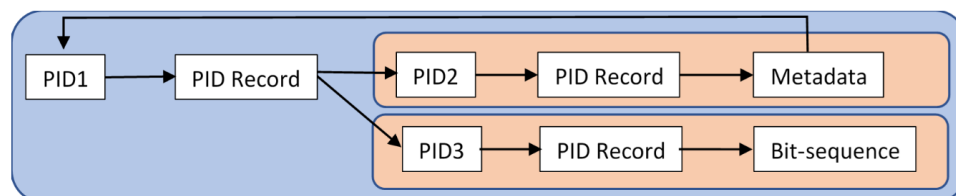
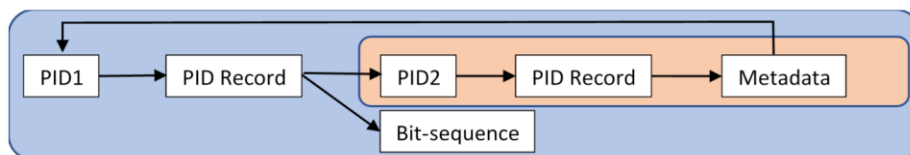
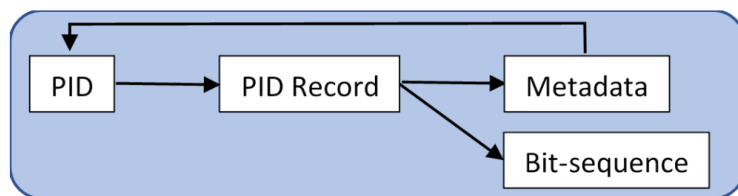
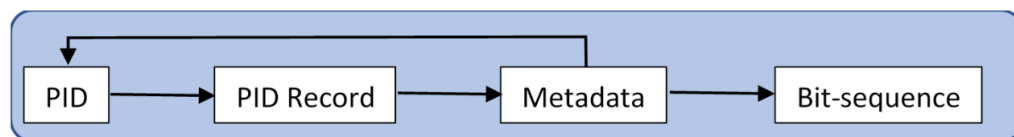
✦ But we have Configuration Types [1]:

“Intensive discussions within the FDO Forum revealed that there are many different ways to organize FAIR Digital Objects and many of them listed in this document are being used in daily practice. “

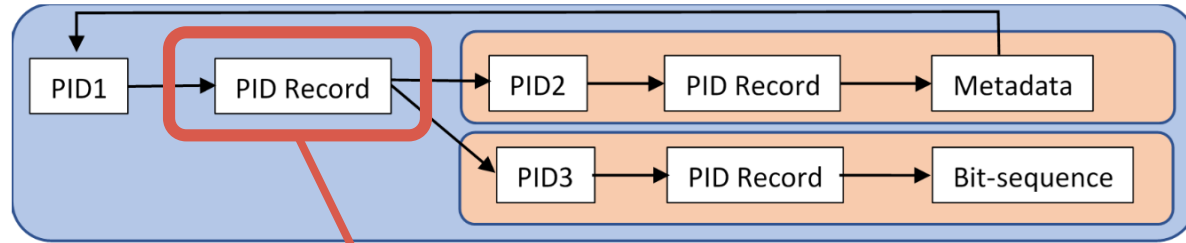
[1] Larry, L., Karsten, P.-. von G., Ivonne, A., Andreas, P., Alexander, S., Zach, T., & Peter, W. (2022) FDO Forum FDO Configuration Types. <https://doi.org/10.5281/zenodo.7825703>

A FDO Configuration Type is ...

✦ The document lists 13 Configuration Types



Example Configuration Type 4



Type 4

Key	Value
PID1	123
PID2	456
FDO-Profile	789

