

# Cataloguer Makeover

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## Are you paying attention?

Strout warned us in 1956: “We may be so blinded by . . . firmly established customs that we are incapable of seeing some utterly simple alternatives which might quickly resolve our problems, and which will someday look so easy and obvious that our descendants will in turn look upon us as unseeing and unimaginative.”

## Outline:

- Possibilities
- Available tools
- Examples
- Conclusion

## Possibilities

IT fluent librarians → better support the future of  
library information dissemination

# Possibilities

## Semantic Web Technologies

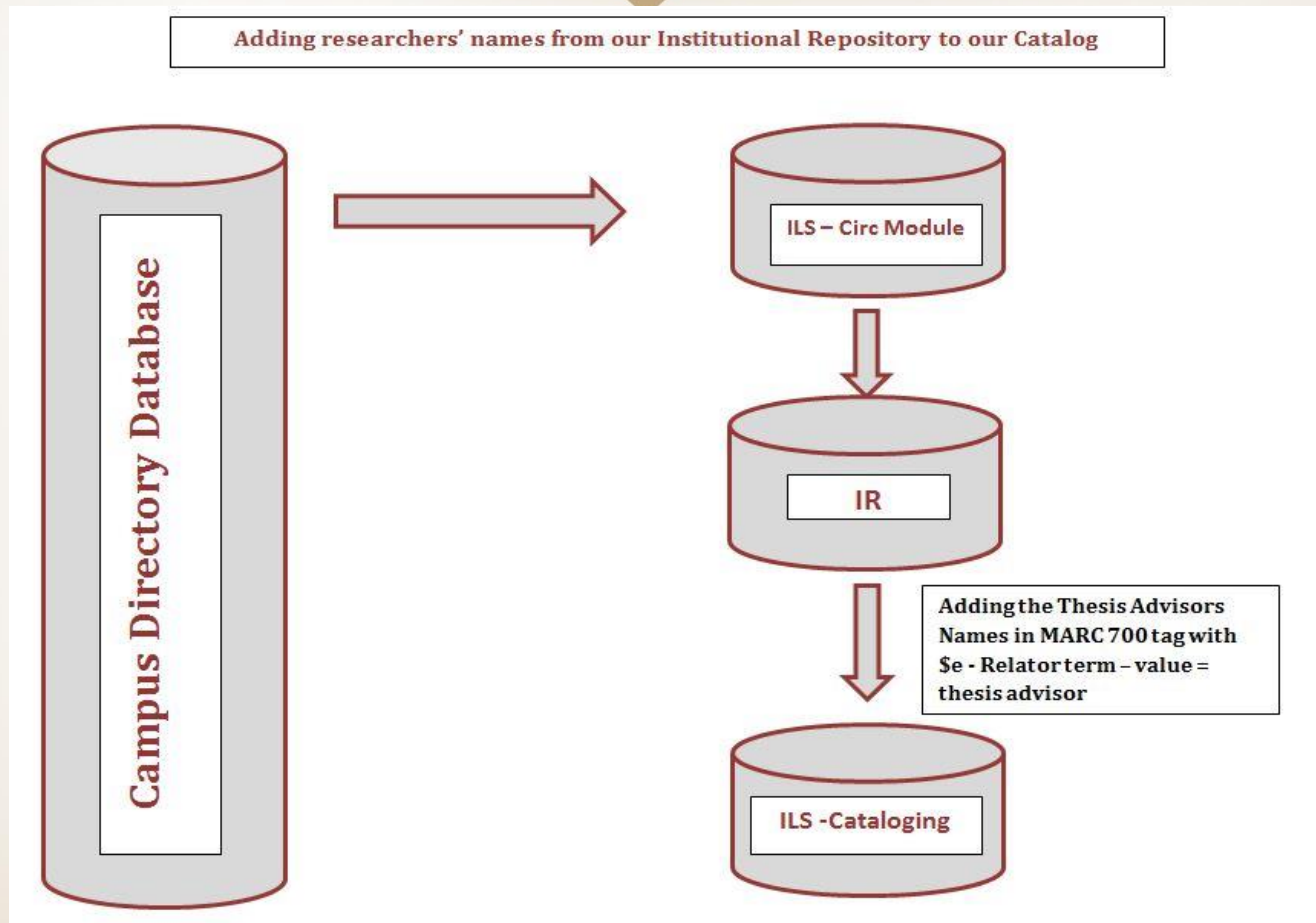
analog based static world → world of high dimensionality

## Possibilities

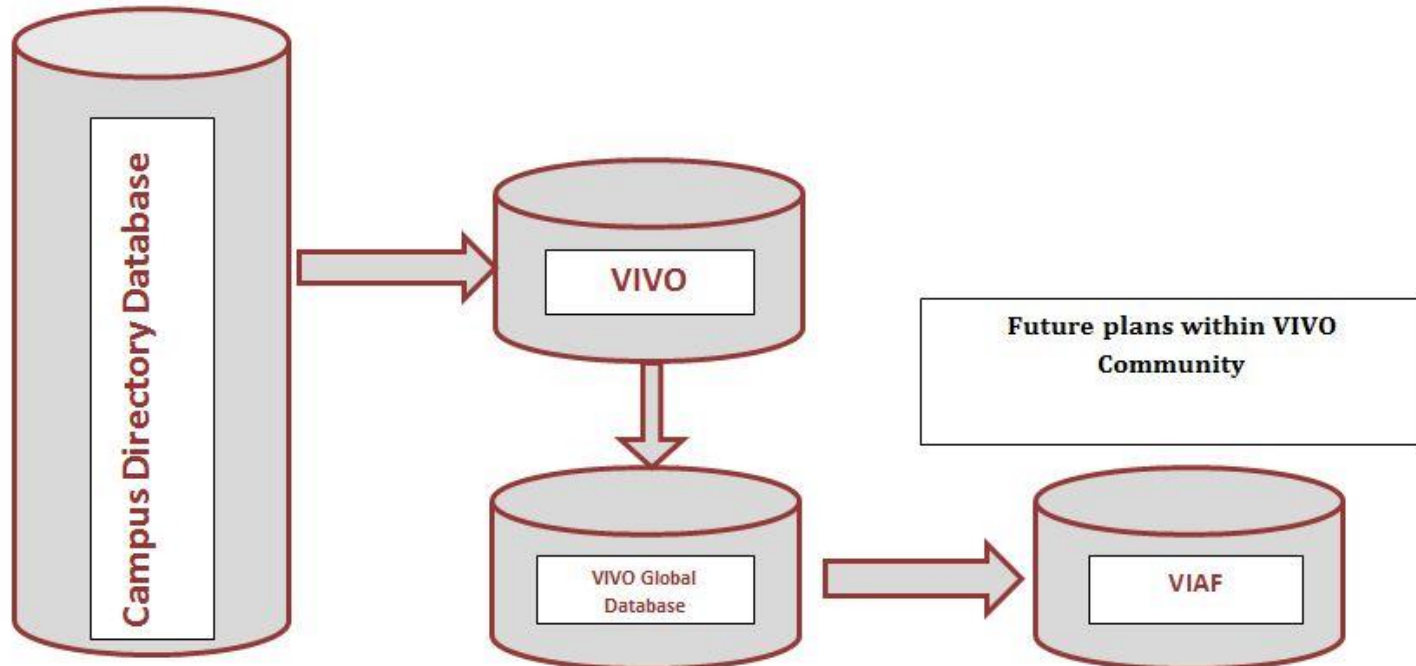
### non-MARC name authorities

- VIVO names used as one of the alternative sources of name authority records in bibliographic data
- Data feeding VIVO comes from campus directory database
- Why not use the same data feed in Institutional Repositories???

## Possibilities: Adding researchers' names from our Institutional Repository to our Catalog



## Possibilities: VIVO names as authoritative source of name authorities



Campus Directory Database – place for getting the non-MARC name authorities



## Available tools: VIVO

VIVO is a linked data platform that serves as a researchers' hub and which provides the names of researchers from academic institutions along with their research output, affiliation, research overview, service, background, researcher's identities, teaching, and much more.

## Available tools: VIVO

- Resource Description Framework (RDF) standard for data encoding
- Web Ontology Language (OWL)

## Available tools: Relational data – RDF data

SQL query language → relational data

SPARQL query language → RDF data

“**SQL** does this by **accessing** tables in relational databases, and **SPARQL** does this by **accessing** a web of **Linked Data**.” Eric Gordon Prud'hommeaux

## Available tools: Karma data integration tool

“Karma is an information integration tool that enables users to quickly and easily integrate data from a variety of data sources including databases, spreadsheets, delimited text files, XML, JSON, KML and Web APIs.”

## Available tools: Modeling data with Karma

1. *Assign Semantic Types*
2. *Constructing the Graph*
3. *Refine Source Model*
4. *Generate Formal Specification*

## Examples: Local ontology

- Person unique identifiers
- Organization unique identifiers

## Examples – person file

Import Options

Column Delimiter:  Header Line Index:  Data Start Row Index:  Text Qualifier:

Encoding:  Number of Lines to import:

Preview (Only 5 rows shown)

File Row Number	UID	UIN	NETID	ORCID	FullName	FirstName	LastName	MidName	Email	Phone	Fax	Title
1	2dec06e9		yadav		Yadav, Manjit S.	Manjit	Yadav	S	yadav@tamu.edu			Professor
2	c81ef444		mindybergman		Bergman, Mindy E.	Mindy	Bergman	E	mindybergman@tamu.ed...			Associate Professor
3	5c2cef0e		t_movay		Movay, Matilda W.	Matilda	Movay	W	t_movay@tamu.edu			Lecturer
4	b6f25071		swagner		Wagner, Susan A.	Susan	Wagner	A	swagner@tamu.edu			Clinical Associate P...
5	613870d1		kryan		Ryan, Kathryn J.	Kathryn	Ryan	J	kryan@tamu.edu			Assistant Professor

## Examples: Karma – person file modeling

FacultyMember1											
UID*	UIN	NETID	orcidId	label	firstName	lastName	middleName	primaryEmail	phoneNumber	faxNumber	preferredTitle
UID	UIN	NETID	ORCID	FullName	FirstName	LastName	MidName	Email	Phone	Fax	Title
2dec06e9	501000784	yadav		Yadav, Manjit S.	Manjit	Yadav	S	yadav@tamu....			Professor
c81ef444	102001180	mindybergman		Bergman, Mindy E.	Mindy	Bergman	E	mindybergma...			Associate Professor
5c2cef0e	102001293	t_mcvay		Mcvay, Matilda W.	Matilda	Mcvay	W	t_mcvay@tam...			Lecturer



# Examples: Karma – N-Triples Person file

```
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://vivoweb.org/ontology/core#FacultyMember> .
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://vivo-dev.library.tamu.edu/ontology/TAMU#NETID> "yadav" .
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://vivo-dev.library.tamu.edu/ontology/TAMU#UID> "2dec06e9" .
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://vivo-dev.library.tamu.edu/ontology/TAMU#UIN> "501000784" .
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://vivoweb.org/ontology/core#middleName> "S" .
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://vivoweb.org/ontology/core#preferredTitle> "Professor" .
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://vivoweb.org/ontology/core#primaryEmail> "yadav@tamu.edu" .
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://www.w3.org/2000/01/rdf-schema#label> "Yadav, Manjit S." .
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://xmlns.com/foaf/0.1/firstName> "Manjit" .
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://xmlns.com/foaf/0.1/lastName> "Yadav" .

<http://vivo-dev.library.tamu.edu/individual/no81ef444> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://vivoweb.org/ontology/core#FacultyMember> .
<http://vivo-dev.library.tamu.edu/individual/no81ef444> <http://vivo-dev.library.tamu.edu/ontology/TAMU#NETID> "mindybergman" .
<http://vivo-dev.library.tamu.edu/individual/no81ef444> <http://vivo-dev.library.tamu.edu/ontology/TAMU#UID> "c81ef444" .
<http://vivo-dev.library.tamu.edu/individual/no81ef444> <http://vivo-dev.library.tamu.edu/ontology/TAMU#UIN> "102001180" .
<http://vivo-dev.library.tamu.edu/individual/no81ef444> <http://vivoweb.org/ontology/core#middleName> "E" .
<http://vivo-dev.library.tamu.edu/individual/no81ef444> <http://vivoweb.org/ontology/core#preferredTitle> "Associate Professor" .
<http://vivo-dev.library.tamu.edu/individual/no81ef444> <http://vivoweb.org/ontology/core#primaryEmail> "mindybergman@tamu.edu" .
<http://vivo-dev.library.tamu.edu/individual/no81ef444> <http://www.w3.org/2000/01/rdf-schema#label> "Bergman, Mindy E." .
<http://vivo-dev.library.tamu.edu/individual/no81ef444> <http://xmlns.com/foaf/0.1/firstName> "Mindy" .
<http://vivo-dev.library.tamu.edu/individual/no81ef444> <http://xmlns.com/foaf/0.1/lastName> "Bergman" .

<http://vivo-dev.library.tamu.edu/individual/n5c2cef0e> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://vivoweb.org/ontology/core#FacultyMember> .
<http://vivo-dev.library.tamu.edu/individual/n5c2cef0e> <http://vivo-dev.library.tamu.edu/ontology/TAMU#NETID> "t_mcvay" .
<http://vivo-dev.library.tamu.edu/individual/n5c2cef0e> <http://vivo-dev.library.tamu.edu/ontology/TAMU#UID> "5c2cef0e" .
<http://vivo-dev.library.tamu.edu/individual/n5c2cef0e> <http://vivo-dev.library.tamu.edu/ontology/TAMU#UIN> "102001293" .
<http://vivo-dev.library.tamu.edu/individual/n5c2cef0e> <http://vivoweb.org/ontology/core#middleName> "W" .
<http://vivo-dev.library.tamu.edu/individual/n5c2cef0e> <http://vivoweb.org/ontology/core#preferredTitle> "Lecturer" .
<http://vivo-dev.library.tamu.edu/individual/n5c2cef0e> <http://vivoweb.org/ontology/core#primaryEmail> "t_mcvay@tamu.edu" .
<http://vivo-dev.library.tamu.edu/individual/n5c2cef0e> <http://www.w3.org/2000/01/rdf-schema#label> "Mcvay, Matilda W." .
<http://vivo-dev.library.tamu.edu/individual/n5c2cef0e> <http://xmlns.com/foaf/0.1/firstName> "Matilda" .
<http://vivo-dev.library.tamu.edu/individual/n5c2cef0e> <http://xmlns.com/foaf/0.1/lastName> "Mcvay" .
```

## Examples – positions file

**Import Options**

Column Delimiter:  Header Line Index:  Data Start Row Index:  Text Qualifier:

Encoding:  Number of Lines to import:

Preview (Only 5 rows shown)

File Row Number	UID	job_title	position_type	Department	org_ID
1	2dec06e9	Professor	Faculty	Marketing	MKTG
2	c81ef444	Associate Professor	Faculty	Psychology	PSYC
3	5c2cef0e	Lecturer	Faculty	Mechanical Engineeri...	MEEN
4	b6f25071	Clinical Associate P...	Faculty	Health and Kinesiolo...	HLKN
5	613870d1	Assistant Professor	Faculty	Biology	BIOL

## Examples: Karma – position file modeling

Position1					
positionForPerson				positionInOrganization	
FacultyMember1				Organization1	
UID*	preferredTitle	label	classLink	label	OrgID*
UID	job_title	position_type	position_URI	Department	org_ID
2dec06e9	Professor	Faculty	http://vivo-dev.library.tam...	Marketing	MKTG
c81ef444	Associate Professor	Faculty	http://vivo-dev.library.tam...	Psychology	PSYC
5c2cef0e	Lecturer	Faculty	http://vivo-dev.library.tam...	Mechanical Engineering	MEEN



## Examples: Karma – N-Triples Positions file

```
<http://vivo-dev.library.tamu/position/n2dec06e9_MKTG_Faculty> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type>
<http://vivoweb.org/ontology/core#Position> .
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type>
<http://vivoweb.org/ontology/core#FacultyMember> .
<http://vivo-dev.library.tamu/position/n2dec06e9_MKTG_Faculty> <http://vivoweb.org/ontology/core#positionForPerson> <http://vivo-
dev.library.tamu.edu/individual/n2dec06e9> .
<http://vivo-dev.library.tamu.edu/individual/nMKTG> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type>
<http://xmlns.com/foaf/0.1/Organization> .
<http://vivo-dev.library.tamu/position/n2dec06e9_MKTG_Faculty> <http://vivoweb.org/ontology/core#positionInOrganization>
<http://vivo-dev.library.tamu.edu/individual/nMKTG> .
<http://vivo-dev.library.tamu/position/n2dec06e9_MKTG_Faculty> <http://www.w3.org/2000/01/rdf-schema#label> "Faculty" .
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://vivo-dev.library.tamu.edu/ontology/TAMU#UID> "2dec06e9" .
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://vivoweb.org/ontology/core#preferredTitle> "Professor" .
<http://vivo-dev.library.tamu.edu/individual/n2dec06e9> <http://vivoweb.org/ontology/core#personInPosition> <http://vivo-
dev.library.tamu/position/n2dec06e9_MKTG_Faculty> .
<http://vivo-dev.library.tamu.edu/individual/nMKTG> <http://vivoweb.org/ontology/core#organizationForPosition> <http://vivo-
dev.library.tamu/position/n2dec06e9_MKTG_Faculty> .
<http://vivo-dev.library.tamu.edu/individual/nMKTG> <http://vivo-dev.library.tamu.edu/ontology/TAMU#OrgID> "MKTG" .
<http://vivo-dev.library.tamu.edu/individual/nMKTG> <http://www.w3.org/2000/01/rdf-schema#label> "Marketing" .
```

## Examples: Karma – N-Triples organizations file

```
<http://vivo-dev.library.tamu.edu/individual/nAGEC> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://xmlns.com/foaf/0.1/Organization> .  
<http://vivo-dev.library.tamu.edu/individual/nAGEC> <http://vivo-dev.library.tamu.edu/ontology/TAMU#OrgID> "AGEC" .  
<http://vivo-dev.library.tamu.edu/individual/nAGEC> <http://www.w3.org/2000/01/rdf-schema#label> "Agricultural Economics" .  
  
<http://vivo-dev.library.tamu.edu/individual/nAGED> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://xmlns.com/foaf/0.1/Organization> .  
<http://vivo-dev.library.tamu.edu/individual/nAGED> <http://vivo-dev.library.tamu.edu/ontology/TAMU#OrgID> "AGED" .  
<http://vivo-dev.library.tamu.edu/individual/nAGED> <http://www.w3.org/2000/01/rdf-schema#label> "Agriculture Leadership Education and Communication" .  
  
<http://vivo-dev.library.tamu.edu/individual/nAGEN> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://xmlns.com/foaf/0.1/Organization> .  
<http://vivo-dev.library.tamu.edu/individual/nAGEN> <http://vivo-dev.library.tamu.edu/ontology/TAMU#OrgID> "AGEN" .  
<http://vivo-dev.library.tamu.edu/individual/nAGEN> <http://www.w3.org/2000/01/rdf-schema#label> "Biological And Agricultural Engineering" .
```

## Utilize available tools

Tools exist to treat relational data and spreadsheets as  
RDF

- Creating RDF data about faculty members by using Karma data integration tool.
- Adding RDF data in the VIVO instance at Texas A&M University.
- Re-use of campus directory persons' data in Integrated Library Systems, Institutional Repositories, Semantic Technologies Applications

## Conclusion

While there still is room for statements like this:  
“Trying to sell the idea of linked data without interfaces is like trying to sell a fax without the invention of paper” it is also gratifying to know that there are applications based on semantic technologies that can help us do our jobs.



## Welcome To VIVO

VIVO is a research-focused discovery tool that enables collaboration among scientists across all disciplines.

Browse or search information on people, departments, courses, grants, and publications.

### Search VIVO

 **Search**

### Log In

Email

Password

**Log in**

# Thank you

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