

# UDEF Executive Overview



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# UDEF Value and Use

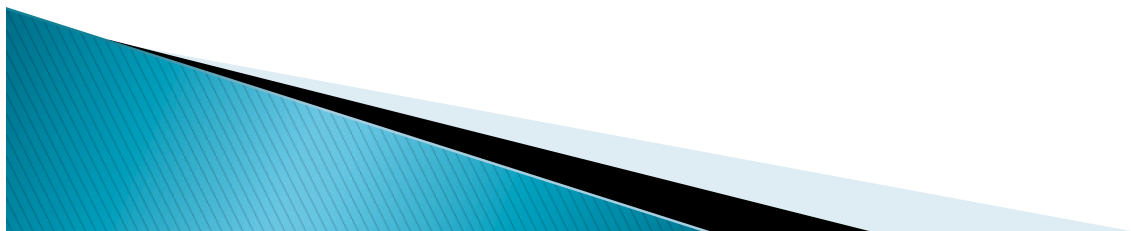


## ▶ UDEF Improves Data Clarity

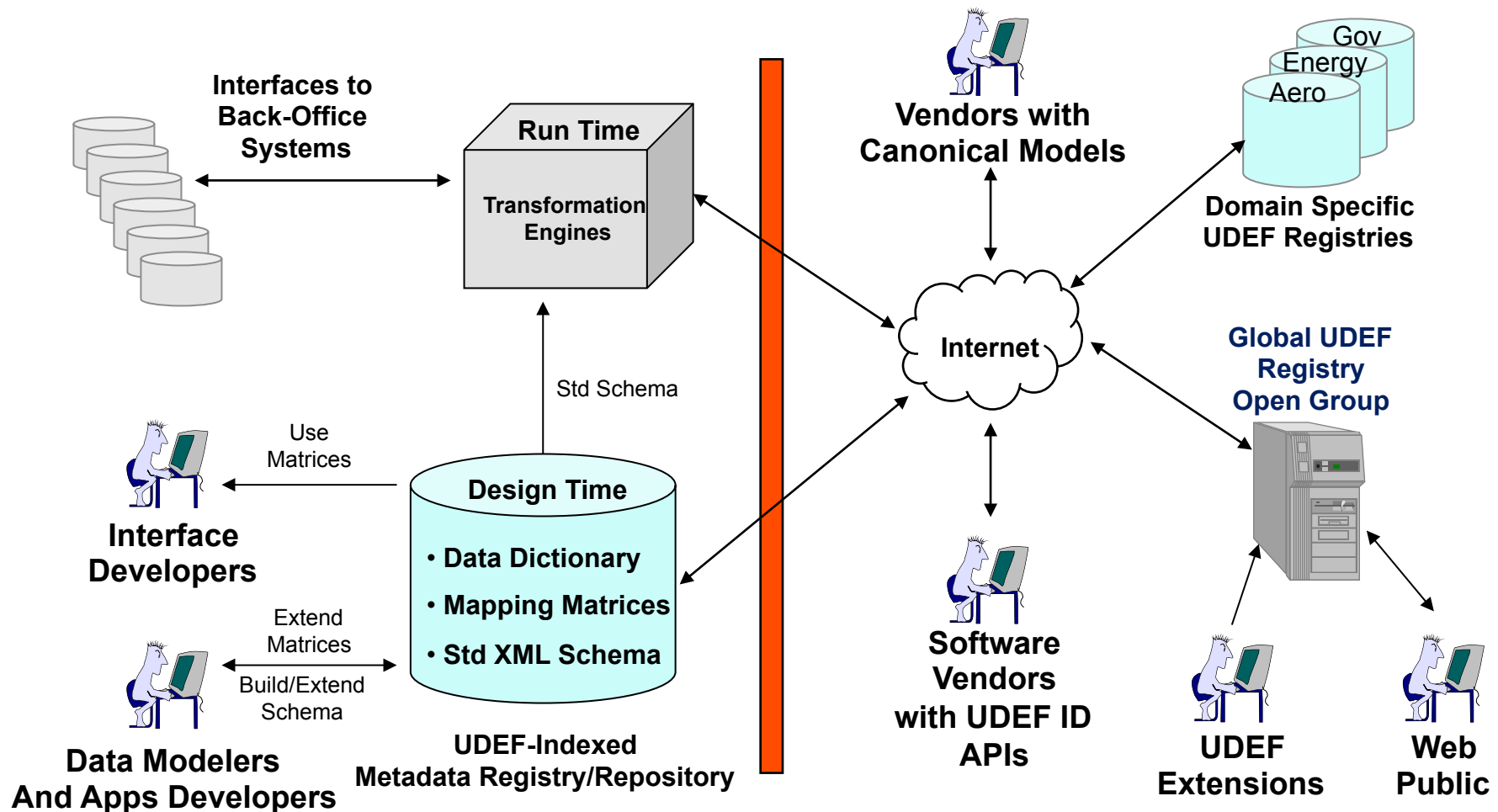
- The use of UDEF encourages a solution (system, application, etc.) to have more precise data definitions that enable greater clarity for everyone that interacts with the solution.
  - This is notably true for semantic web based solutions that depend so heavily on semantic clarity and precision.

## ▶ UDEF Simplifies Information Exchange

- The use of UDEF reduces the number of integration points and therefore simplifies the task of implementing information exchange
  - As the scope of UDEF-enabled solutions grows, so too do the benefits of effective information sharing, i.e. in achieving Boundaryless Information Flow.



# UDEF – A Global View



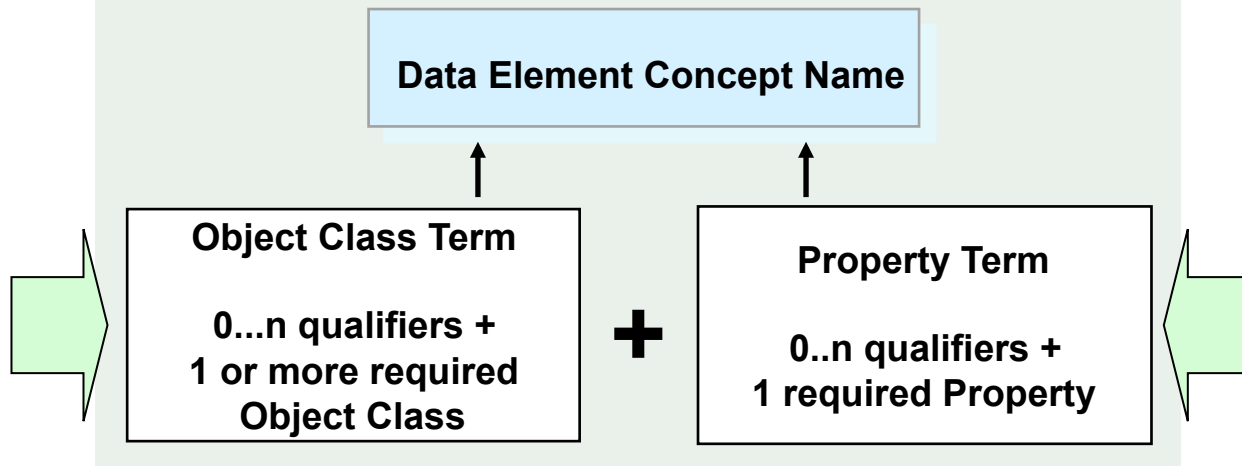
# Universal Data Element Framework

## UDEF Conforms to the Naming Convention of ISO/IEC 11179-5

### Object Class List

- Entity
- Document
- Enterprise
- Place
- Program
- Product
- Process
- Person
- Asset
- Law-Rule
- Environment
- Condition
- Liability
- Animal
- Plant
- Substance
- Event

### ISO/IEC 11179-5 Naming Convention



### Property List\*

- Amount
- Code
- Date
- Date Time
- Graphic
- Identifier
- Indicator
- Measure
- Name
- Percent
- Picture
- Quantity
- Rate
- Text
- Time
- Value
- Sound
- Video

### *Example UDEF-Based Data Element Concept Names:*

Document Abstract Text

Enterprise Name

Product Price Amount

Product Scheduled Delivery Date

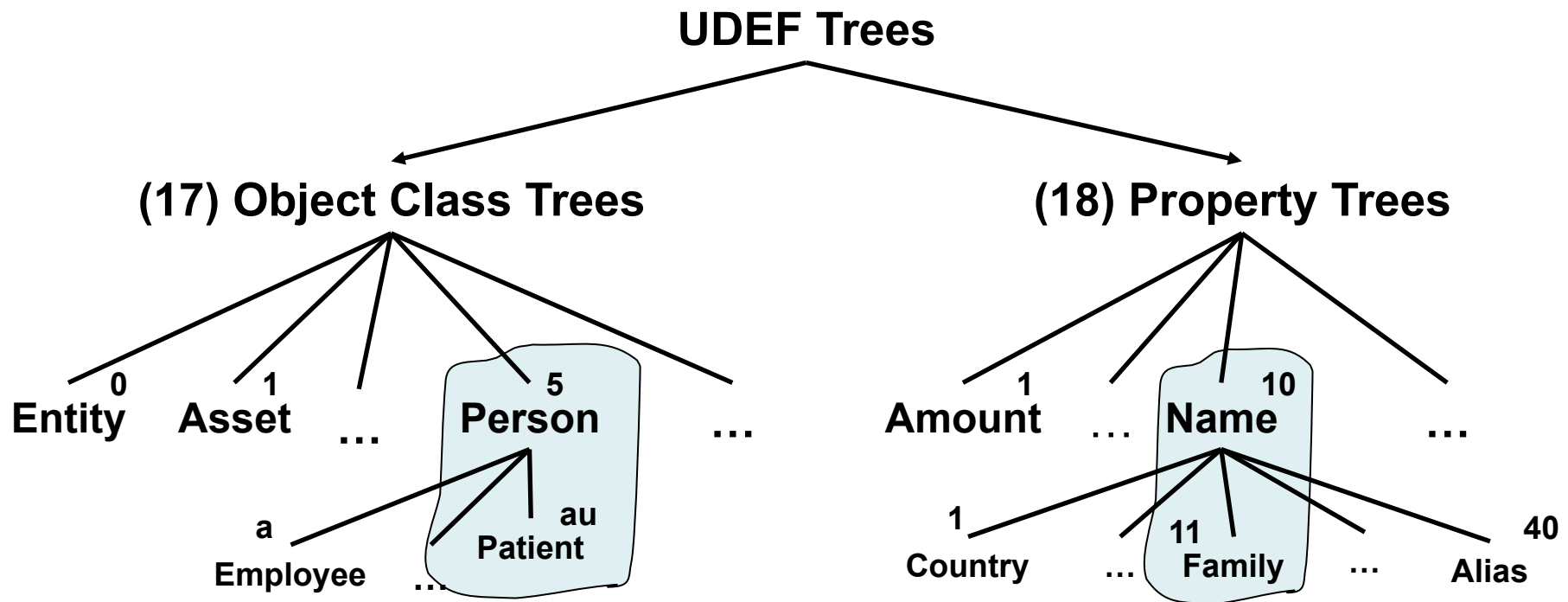
Engineering Design Process Cost Amount

Employee Person Family Name

\* Based on Tables 8-1 and 8-3 in ISO 15000-5

**UDEF Names follow the rules of English –  
Qualifiers precede the word they modify**

# Creating the UDEF ID



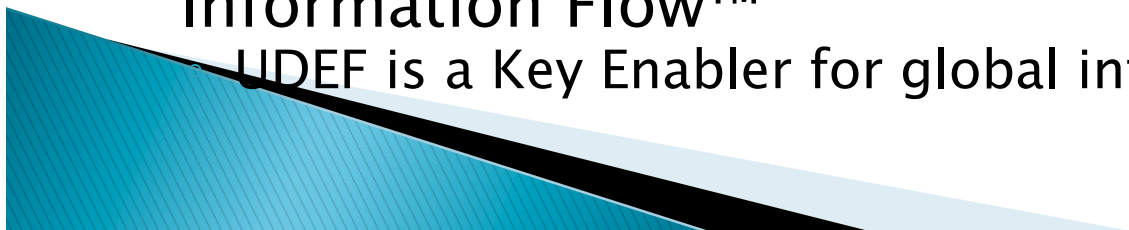
**Patient Person\_Family Name has UDEF ID = au.5\_11.10**

[http://www.opengroup.org/udfinfo/htm/en\\_defs.htm](http://www.opengroup.org/udfinfo/htm/en_defs.htm)

# UDEF Recent Activities



- ▶ Five UDEF Extensions – v1.22, 1.23, 1.24, 1.25, 1.3
  - Support for global non-profit UDEF Requirements
  - V1.3 Provides Foundation for Distributed UDEF Registries
  - For each new version
    - The UDEF Interested Parties had opportunity to review and comment.
    - The UDEF Members voted
    - The Open Group Board approved
- ▶ The QLM Project Officially Adopted the UDEF – May 2011
  - UDEF Names and IDs integral to QLM System Object Model
- ▶ The FACE Consortium Adoption of UDEF
  - Like Dewey Decimal System for Software Artifacts Library Registry
  - Possible use within the FACE Data Model
- ▶ Interoperability is essential for Boundaryless Information Flow™
  - UDEF is a Key Enabler for global interoperability



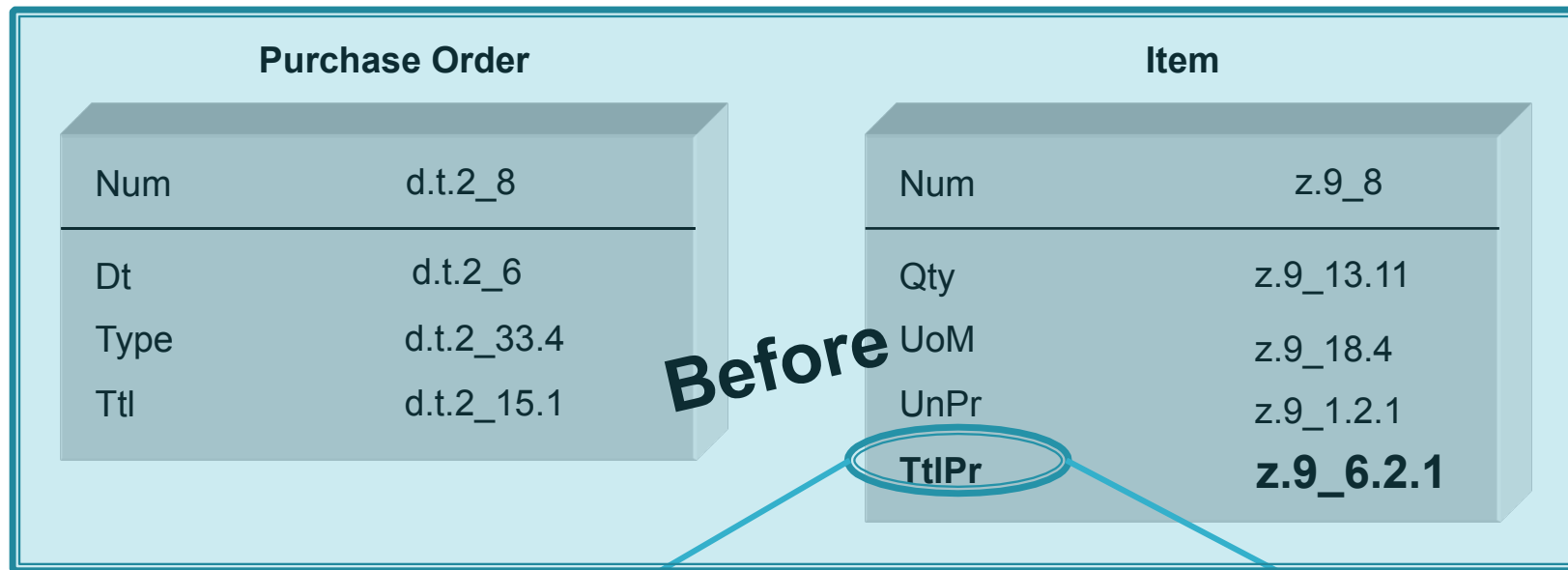
# Procurement System Mapping to UDEF

Item	
Num	z.9_8
Qty	z.9_13.11
UoM	z.9_18.4
UnPr	z.9_1.2.1
<b>TtlPr</b>	<b>z.9_6.2.1</b>

1. Identify the applicable UDEF property word that characterizes the dominant attribute (property) of the data element concept. **For this example = Amount**
2. Identify the dominant UDEF object word that the dominant property (selected in Step 1) is describing. **For this example = Product**
3. By reviewing the UDEF tree for the selected property identified in Step 1, identify applicable qualifiers that are necessary to unambiguously describe the property word term. **For this example = Total Price Amount**
4. By reviewing the UDEF tree for the selected object identified in Step 2, identify applicable qualifiers that are necessary to unambiguously describe the object word term. **For this example = Ordered Product**
5. Concatenate the object term and the property term to create a UDEF naming convention compliant name where it is recognized that the name may seem artificially long. **For this example = Ordered Product\_Total Price Amount**
6. Derive a structured ID based on the UDEF taxonomy that carries the UDEF inherited indexing scheme. **For this example <OrderedProductTotalPriceAmount UDEFID="z.9\_6.2.1">**



# Data to Information in Six Steps



**After**

UDEF ID	Object Type or Role	Object Class	Property Type	Property
<b>z.9_6.2.1</b>	<b>Ordered</b>	<b>Product</b>	<b>Total Price</b>	<b>Amount</b>

**Result – UDEF Naming Improves Data Clarity and Data Quality**



# Use the UDEF Coding Sheet to Collect Data Element Concepts

UDEF Coding Sheet				
UDEF ID	UDEF Object Qualifier	UDEF Object	UDEF Property Qualifier	UDEF Property
d.t.2_8	Purchase Order	Document		Identifier
d.t.2_6	Purchase Order	Document		Date
d.t.2_33.4	Purchase Order	Document	Type	Code
z.9_8	Ordered	Product		Identifier
z.9_13.11	Ordered	Product	Ordered	Quantity
z.9_1.2.1	Ordered	Product	Unit Price	Amount
z.9_6.2.1	Ordered	Product	Total Price	Amount

UDEF-IT, LLC <https://udef-it.com>

# Create the Gap Analysis XML Input File

## Source System Data

Purchase Order

Num	d.t.2_8
Dt	d.t.2_6
Type	d.t.2_33.4
Ttl	d.t.2_15.1

```
<?xml version="1.0" encoding="UTF-8" ?>
<PO>
  <Hdr>
    <Num GUID="d.t.2_8">1234</Num>
    <Dt GUID="d.t.2_6">2009-04-15</Dt>
    <Type GUID="d.t.2_33.4">Open</Type>
    <Ttl GUID="d.t.2_15.1">6000</Ttl>
  </Hdr>
  <Item>
    <Num GUID="z.9_8">XY12B</Num>
    <Quan GUID="z.9_13.11">200</Quan>
    <UoM GUID="z.9_18.4">Each</UoM>
    <UnPr GUID="z.9_1.2.1">10.25</UnPr>
    <TtlPr GUID="z.9_6.2.1">2050</TtlPr>
  </Item>
</PO>
```

Item

Num	z.9_8
Qty	z.9_13.11
UoM	z.9_18.4
UnPr	z.9_1.2.1
TtlPr	z.9_6.2.1

# Map Both Systems to the UDEF

## Source System File

```
<?xml version="1.0" encoding="UTF-8" ?>
<PO>
  <Hdr>
    <Num GUID="d.t.2_8">1234</Num>
    <Dt GUID="d.t.2_6">2009-04-15</Dt>
    <Type GUID="d.t.2_33.4">Open</Type>
    <Ttl GUID="d.t.2_15.1">6000</Ttl>
  </Hdr>
  <Item>
    <Num GUID="z.9_8">XY12B</Num>
    <Quan GUID="z.9_13.11">200</Quan>
    <UoM GUID="z.9_18.4">Each</UoM>
    <UnPr GUID="z.9_1.2.1">10.25</UnPr>
    <TtlPr GUID="z.9_6.2.1">2050</TtlPr>
  </Item>
</PO>
```

## Target System File

```
<?xml version="1.0" encoding="UTF-8" ?>
<Purch>
  <HD>
    <ID GUID="d.t.2_8">1234</ID>
    <Dte GUID="d.t.2_6">2009-04-15</Dte>
    <Prior GUID="d.t.2_31.4">High</Prior>
    <Type GUID="d.t.2_33.4">Open</Type>
    <OrdTot GUID="d.t.2_15.1">6000</OrdTot>
  </HD>
  <Prd>
    <ID GUID="z.9_8">XY12B</ID>
    <Qty GUID="z.9_13.11">200</Qty>
    <UofM GUID="z.9_18.4">Each</UofM>
    <UnitPr GUID="z.9_1.2.1">10.25</UnitPr>
    <TotPr GUID="z.9_6.2.1">2050</TotPr>
  </Prd>
</Purch>
```

# Example Gap Analysis Results

<http://www.udef-it.com/>

## Source to Target Gap Analysis Comparison

Gap Analysis			
		Source	Target
A	B	C	D
UDEF ID	UDEF Definition	File1 Element	File2 Element
d.t.2_8	Purchase.Order.Document Identifier	Num	ID
d.t.2_6	Purchase.Order.Document Date	Dt	Dte
d.t.2_33.4	Purchase.Order.Document Type.Code	Type	Type
d.t.2_15.1	Purchase.Order.Document Value.Amount	Ttl	OrdTot
z.9_8	Ordered.Product Identifier	Num	ID
z.9_13.11	Ordered.Product Ordered.Quantity	Quan	Qty
z.9_18.4	Ordered.Product Measurement-Unit.Code	UoM	UofM
z.9_1.2.1	Ordered.Product Unit.Price.Amount	UnPr	UnitPr
z.9_6.2.1	Ordered.Product Total.Price.Amount	TotPr	TotPr
d.t.2_31.4	Purchase.Order.Document Priority.Code		Prior

Focus Data Integration Mapping Effort on the Gaps

The UDEF ID Enables Data Integration

# Additional Information about the UDEF



- The UDEF Online  
<http://www.opengroup.org/udefinfo/>
- Multi-lingual UDEF (English, French and Dutch)  
[http://www.opengroup.org/udefinfo/htm/en\\_defs.htm](http://www.opengroup.org/udefinfo/htm/en_defs.htm)  
[http://www.opengroup.org/udefinfo/htm/fr\\_defs.htm](http://www.opengroup.org/udefinfo/htm/fr_defs.htm)  
[http://www.opengroup.org/udefinfo/htm/nl\\_defs.htm](http://www.opengroup.org/udefinfo/htm/nl_defs.htm)
- Frequently Asked Questions  
<http://www.opengroup.org/udefinfo/faq.htm>
- A Cartoon Illustration of a UDEF Solution  
[https://udef-it.com/Solution\\_Speaks.html](https://udef-it.com/Solution_Speaks.html)



# Contact Information

