P&C XML 2.1

Data in Motion

Sessions

12:45 PM XML 2.1 Under the Hood

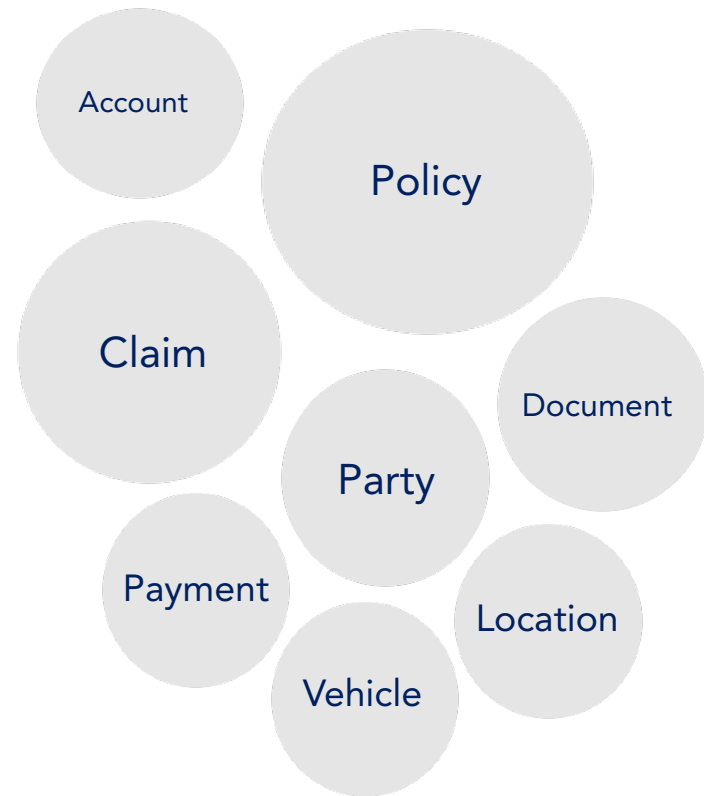**2:00 PM** Transitioning from 1.x

3:00 PM The Next Generation
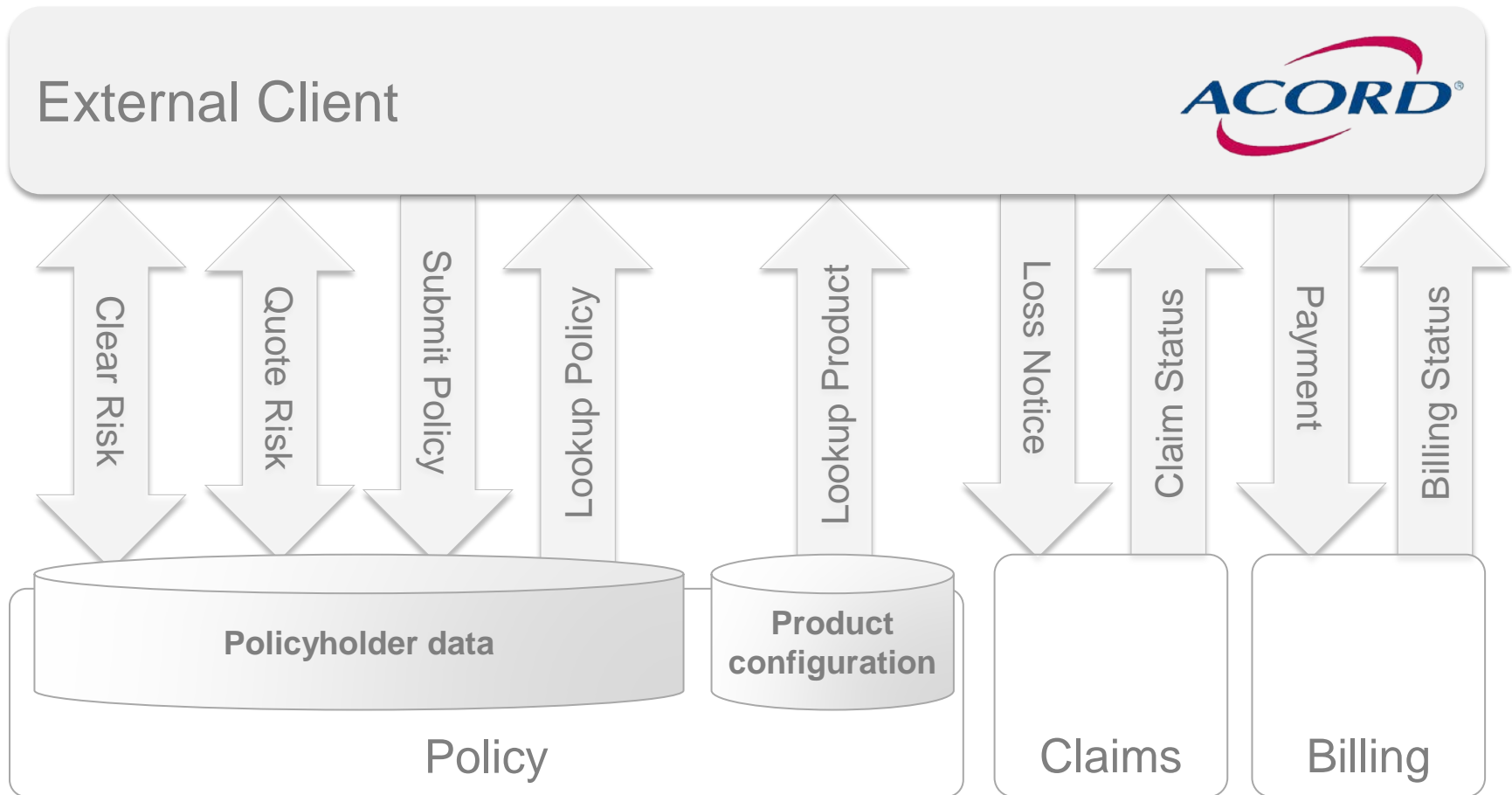
CUSTOMER

CARRIER

AGENCY
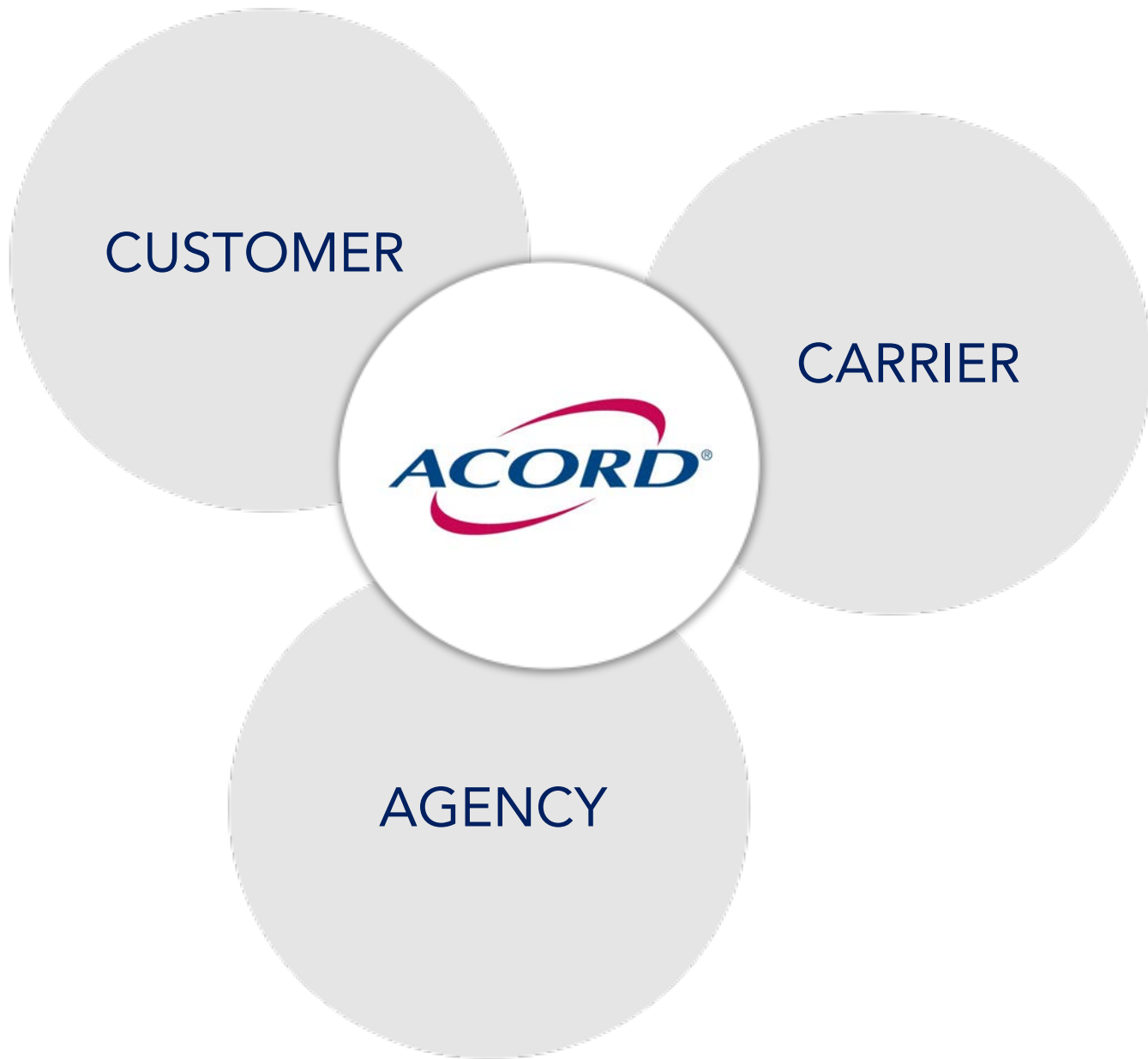
Simple Resources

Types:

- Person/Business
- Location
- Insurable (Unit at Risk)
- Artifact (Document/Photo/etc.)

Account

Policy

Claim

Document

Party

Payment

Location

Vehicle

Benefits

- Reduced size and complexity (42 to 9 MB)
- Common resource model (1109 - 292 - 49)
- Cross technology support (XML/JSON)
- Simpler extensibility (no more com.xxx_)
- XML alternative to AL3 download
- REST / HATEOAS / HAL principals
- Over 30 years of investment (AL1 in 1983)

Sample Usage

External Client

ACORD®

Clear Risk

Quote Risk

Submit Policy

Lookup Policy

Lookup Product

Loss Notice

Claim Status

Payment

Billing Status

Policyholder data

Product configuration

Policy

Claims

Billing

ItemIdInfo Structure

@SourceSystemRefs
@SourcePartyRefs

AgencyId
InsurerId
SystemId

OtherIdentifier
  OtherId
  OtherIdTypeCd

VersionNumber
VersionStartDtTime
VersionEndDtTime

CUSTOMER

CARRIER

Identifier

AGENCY
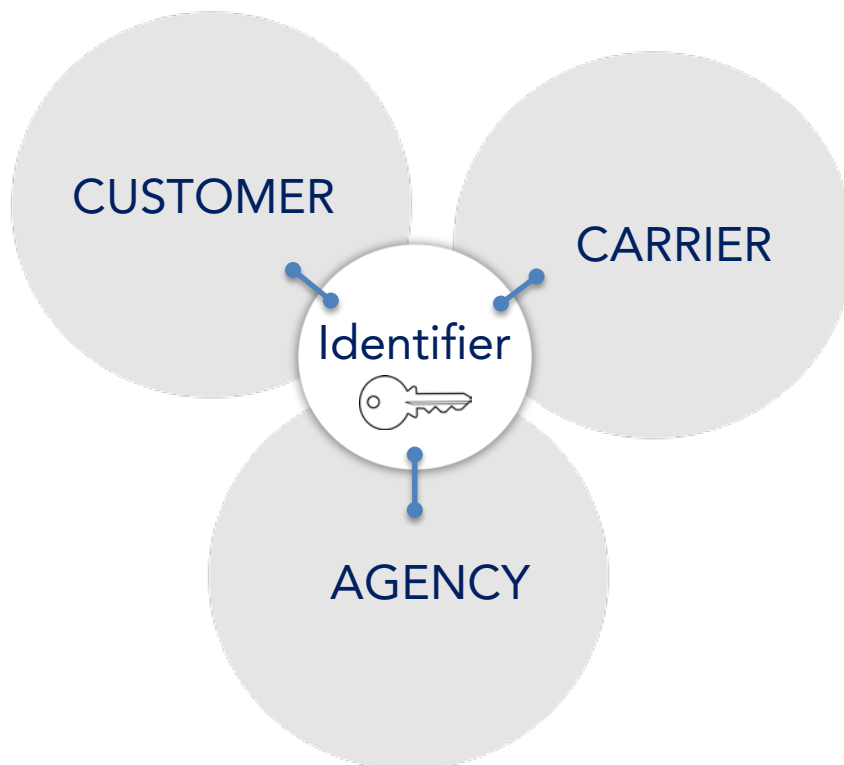
Link Structure

@rel = type

@href = resource

@title = display

```
<Link rel="self" href="/policies/123/" title="Self" />
<Link rel="next" href="/policies/124" title="Next" />
<Link rel="last" href="/policies/122" title="Last" />
<Link rel="vehicle" href="/policies/122/vehicle/1" title="Vehicle 1" />
<Link rel="doc" href="/docs/188/policies/" title="Documentation" />
```

```
"Link" : [
    { "@title": "Self", "@href": "/policies/123/", "@rel": "self" },
    { "@title": "Next", "@href": "/policies/124",  "@rel": "next"  },
    { "@title": "Last", "@href": "/policies/122",  "@rel": "last"   },
    { "@title": "Car", "@href": "/policies/122/vehicle/1", "@rel": "vehicle" },
    { "@title": "Documentation", "@href": "/docs/188/policies/", "@rel": "doc" }
  ]
```
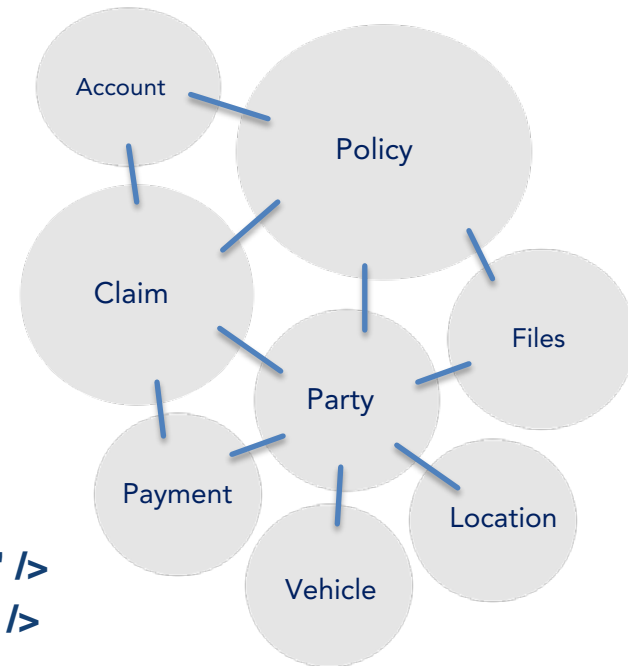
Resources List

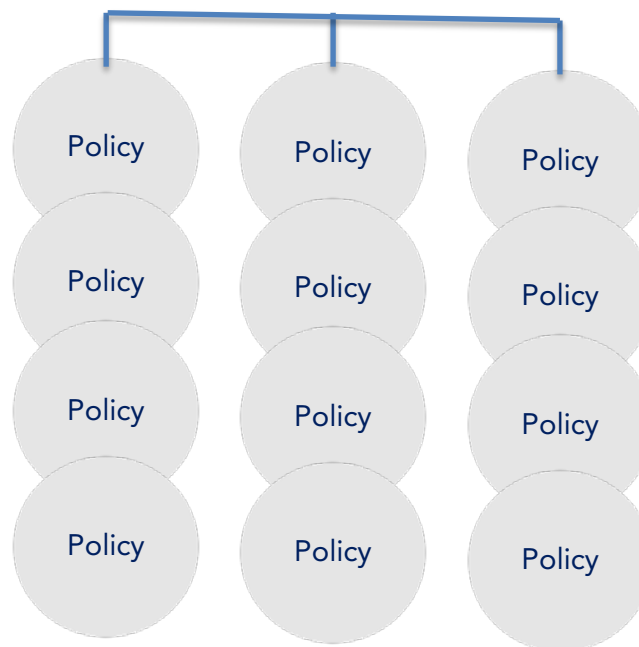Contains any repeating resources, used heavily in queries. e.g. **/policies/**

```
<Resources>
  <Link rel="next" />
  <Policy>first</Policy>
  <Policy>sec</Policy>
  <Policy>third</Policy>
</Resources>
```

```
"Resources": {
  "Link" :
    {"@rel": "next" },
  "Policy": [
    "…" ,
    "…" ,
    "…" ,
    "…"
  ]
}
```

JSON Representation

```json
{
  "Policy":{
    "@id":"123",
    "PolicyNumber":"P412312",
    "LOBCd":"BOP",
    "ContractTerm":"",
    "Producer":"",
    "InsuredOrPrincipal":"",
    "Policy":"",
    "Location":"",
    "LocationInfo":"",
    "BOPLineBusiness":""}
}
```

Policy XML converts easily into JSON; mainly because it doesn't use mixed content.

Attributes are used only for joins and identifiers.

URI Formatting

GET /parties/?surname=harvey

POST /policies/123/?action=renew

GET /policies/123/claims/

POST /policies/123/claims/2/

Simple HTTP Calls

URI Parameters can be used instead of XML Message or Business Purpose Element

Sample API

- **Account**
  - /accounts/ GET
  - /accounts/ POST
  - /accounts/{id}/ GET
  - /accounts/{id}/ PUT
  - /accounts/{id}/ DELETE
  - /accounts/?action=merge

- **Policy**
  - /policies/{id}/?action=clear
  - /policies/{id}/?action=reserve
  - /policies/{id}/?action=evaluate
  - /policies/{id}/?action=rate
  - /policies/{id}/?action=submit
  - /policies/ GET
  - /policies/ POST
  - /policies/{id}/ GET
  - /policies/{id}/ DELETE

- **Product**
  - /products/industrycodes GET
  - /products/classcodes GET
  - /products/questions GET
  - /products/coverages GET

- **User**
  - /users/ GET
  - /users/{id}/ GET
  - /users/{id}/?action=authenticate
  - /users/{id}/?action=authorize

- **Other**
  - /agencies/…
  - /producers/…
  - /carriers/…
  - /payments/…
  - /claims/…
  - /documents/…

Best Practices

1. Use nouns but no verbs
2. GET method should not alter the state
3. Use plural nouns
4. Use sub-resources for relations
5. Use HTTP headers for serialization formats
6. Use HATEOAS for linking and embedding
7. Provide filtering, sorting, field selection and paging
8. Handle Errors with HTTP status codes
9. Version your API in URL

[http://blog.mwaysolutions.com/2014/06/05/10-best-practices-for-better-restful-api/]