Reason about medical data in a temporal context, from many sources.

1. **many sources**: (C)CDA, v2, v3 and FHIR
2. **temporal context**: now and in the past
3. **reason**: string facts together, across 1 and 2
Reasoning / Common model

- Transform input messages to a common model
- Combine (Zoom in on) elements from different messages
- Our model: Entities playing roles, participating in acts
FHIR from the v3 view

- FHIR defines Operations on resources/items
- Supported by modern programming tools
- Resources map to the RIM
- FHIR datatypes map to v3 datatypes
• Update address of an organization
  ● No default v3 interaction expresses this

• But best of both worlds =
  ● A custom v3 internally, and
  ● A RESTful FHIR PUT Organization externally
This message is the 'payload' of a HTTP PUT to http://mgrid.net/fhir/Organization/650 and contains an update of the address. (note that the other items have not changed)
Custom RMIM Organization update
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<OrganizationUpdate classCode="ACTN" moodCode="EVN" xmlns="urn:hl7-org:v3">
  <id root="1.1"/>
  <participation typeCode="PART">
    <subject classCode="IDENT">
      <scopingOrganization classCode="ORG" determinerCode="INSTANCE">
        <id root="2.16.840.1.113883.2.4.3.31" extension="650"/>
        <id root="2.16.840.1.113883.2.4.6.1" extension="011111"/>
        <code code="GPS" codeSystem="2.16.840.1.113883.2.4.3.31" displayName="General Practitioner Surgery"/>
        <name>Doctor Deke</name>
        <telecom use="WP" value="030-1234567">  
          <useablePeriod value="20000101000000" operator="I"/>
        </telecom>
        <addr>
          <streetAddressLine>Oostenburgervoorstraat 100</streetAddressLine>
          <city>Amsterdam</city>
          <postalCode>1018HA</postalCode>
          <country>Nederland</country>
          <useablePeriod value="20050624113454"/>
        </addr>
        <asPartOfWhole classCode="PART">
          <wholeParent classCode="ORG" determinerCode="INSTANCE">
            <id root="2.16.840.1.113883.2.4.3.31" extension="456"/>
          </wholeParent>
        </asPartOfWhole>
      </scopingOrganization>
    </subject>
  </participation>
</OrganizationUpdate>
DO $$
DECLARE
controlact0 bigint;
organization1 bigint;
organization2 bigint;
role3 bigint;
role4 bigint;
participation5 bigint;
BEGIN
controlact0 := ControlAct_insert(_mif := 'MGPV_MT000001UV', _clonename := 'OrganizationUpdate', "classCode": 'O',
organization1 := Organization_insert(_mif := 'MGPV_MT000001UV', _clonename := 'Organization', "addr": A,
organization2 := Organization_insert(_mif := 'MGPV_MT000001UV', _clonename := 'Parent', "classCode": 'O',
role3 := Role_insert(_mif := 'MGPV_MT000001UV', _clonename := 'PartOfWhole', "classCode": 'PART', "play": R,
role4 := Role_insert(_mif := 'MGPV_MT000001UV', _clonename := 'Subject', "classCode": 'IDENT', "scoper": S,
participation5 := Participation_insert(_mif := 'MGPV_MT000001UV', _clonename := 'Participant', "act": c
END $$;
Conclusions

- FHIR provides primitives for Organization updates
- Mapping FHIR to v3 “needs some work”
  - Attribute mappings are unfinished
  - FHIR datatypes to R1/R2 datatypes
Example: Group all female patients under 60, with high bloodpressure and known smoking and alcohol use per organisation. Provide group percentages per organisation for high cockroft, smokers, and high hdl ratio.
Questions?