San Francisco's Eric Davis intercepted a Steve Walsh pass on the next series to set up a seven-yard Young touchdown pass to Brent Jones.

### Semantic Enrichment

**Objective**

Make explicit implicit information

**Why?**

Establish coherent interpretation of text

Needed before reasoning

**Cycle**

1. Reading of text collection
2. Rumination of BKB
3. Enrichment of collection texts
4. Repeat

**Background Knowledge Discovery**

**Domain**

- Docs.
- Reading
- Background Knowledge

**Rumination**

- Enrichment

**Enrichment of Text with Background Knowledge**

**Implicit**

- San Francisco's Eric Davis intercepted pass
- Steve Walsh pass
- Young touchdown pass

**More explicit**

- San Francisco's Eric Davis plays on San Francisco
- Eric Davis intercepted pass
- Steve Walsh threw pass
- Young completed pass for touchdown
- Brent Jones catch pass for touchdown

**Semantic Enrichment**

**Example prop definitions**

prop('NV', [N,V] : [V:N:nsubj, not(V:_:'dobj')]: [verb(V)]).

prop('NVNPN', [N1,V,N2,P,N3] : [V:N2:'dobj', V:N3:Prep, subj(V,N1)] : [prep(Prep,P)]).

prop('N-has-value-C', [N,Val] : [N:Val:_] : [nn(N), cd(Val), not(lemma(Val,'one'))]).

**Background Knowledge Base**

- `X:has-instance:'Eric_Davis'`
- `X:has-instance:'Steve_Walsh'`
- `X:has-instance:'Marino'`
- `X:has-instance:'Jets'`
- `X:has-instance:'Giants'`
- `X:has-instance:'Eagles'`
- `X:has-instance:'Bills'`
- `X:has-instance:'Colts'`
- `X:has-instance:'San_Francisco'`
- `X:has-instance:'Young'`
- `X:has-instance:'Brent_Jones'`
- `X:has-instance:'Steve_Walsh'`
- `X:has-instance:'Marino'`

**Examples**

- `prop('NN NNP': 'pass')`
- `NN 28 'end': 'catch': 'pass'`
- `NN 6 'end': 'drop': 'pass'`

- `prop('NNP': 'pass')`
- `NNP 2241 'Marino': 'catch': 'pass'`
- `NNP 2106 'Marino': 'throw': 'pass'`
- `NNP 844 'Marino': 'complete': 'pass'`
- `NNP 434 'Marino': 'intercept': 'pass'`

- `prop('NVNPN': 'pass')`
- `NVNPN 189 'Marino': 'catch': 'pass' for 'touchdown'`
- `NVNPN 26 'Marino': 'complete': 'pass' for 'touchdown'`

- `prop('NVN': 'pass')`
- `NVN 98 'Marino': 'throw': 'pass'`
- `NVN 27 'Marino': 'complete': 'pass'`

- `prop('NVNPN': 'touchdown')`
- `NVNPN 114 'Marino': 'catch': 'pass' for 'touchdown'`