Several Status Depending on Your View of Time

```
(let [current-db (d/db conn)
     full-history-db (d/history current-db)
     snapshot-db (d/as-of current-db #inst "2001-01-02")
     history-at-t-db (d/history snapshot-db)
     f (fn [db] (vec (sort-by second (d/q status-query db))))]
 {:current-status (f current-db)
   :status-before-ben-dies (f snapshot-db)
   :full-history-of-status (f full-history-db)
   :history-until-ben-dies (f history-at-t-db)})
```

```
{:current-status [[:spider-man #inst"2001-01-05T00:00:00.000-00:00"]],
:status-before-ben-dies [[:bitten #inst"2001-01-01T00:00:00.000-00:00"]].
:full-history-of-status [[:kid #inst"2000-01-01T00:00:00.000-00:00"]
                          [:bitten #inst"2001-01-01T00:00:00.000-00:00"]
                          [:spider-man #inst"2001-01-05T00:00:00.000-00:00"]],
:history-until-ben-dies [[:kid #inst"2000-01-01T00:00:00.000-00:00"]
                          [:bitten #inst"2001-01-01T00:00:00.000-00:00"]]}
```

Several Status Depending on Your View of Time

```
(let [current-db (d/db conn)
             full-history-db (d/history current-db)
             snapshot-db (d/as-of current-db #inst "2001-01-02")
             history—at—t—db (d/history snapshot—db)
             f (fn [db] (vec (sort-by second (d/q status-query db))))]
         {:current-status (f current-db)
          :status-before-ben-dies (f snapshot-db)
          :full-history-of-status (f full-history-db)
          :history-until-ben-dies (f history-at-t-db)})
{:current-status [[:spider-man #inst"2001-01-05T00:00:00.000-00:00"]],
 :status-before-ben-dies [[:bitten #inst"2001-01-01T00:00:00.000-00:00"]],
 :full-history-of-status [[:kid #inst"2000-01-01T00:00:00.000-00:00"]
                          [:bitten #inst"2001-01-01T00:00:00.000-00:00"]
                          [:spider-man #inst"2001-01-05T00:00:00.000-00:00"]],
 :history-until-ben-dies [[:kid #inst"2000-01-01T00:00:00.000-00:00"]
                          [:bitten #inst"2001-01-01T00:00:00.000-00:00"]]}
```

Summary

- Datascript and Datomic are entity-oriented databases
 - Datascript: In memory, JVM and JavaScript
 - Datomic: Persistent, JVM, keeps all history
- Entities are collections of facts represented as datoms
- Attribute-level schemas allow for flexible and extensible data modeling
- These DBs have powerful search capability
- This talk just scratches the surface
 - Architecture (scalability), cross-db queries, entity api, advanced identity topics, db functions, etc.
- Give them a try!