# Mapping by Source

#### Gamedev

- m1)  $\forall x. \forall y. \forall n. \forall t. \forall ci. \forall co. \forall w. \mathbf{gamedev}(x, y, n, t, ci, co, w)$  $\rightarrow \mathbf{SoftwareHouse}(n, w) \land \mathbf{locatedIn}(n, ci, X, Y) \land \mathbf{Location}(ci, co)$
- m2)  $\forall x. \forall y. \forall n. \forall t. \forall ci. \forall co. \forall w. \mathbf{gamedev}(x, y, n, t, ci, co, w) \land (t = publisher) \rightarrow \mathbf{Publisher}(n)$
- m3)  $\forall x. \forall y. \forall n. \forall t. \forall ci. \forall co. \forall w. \mathbf{gamedev}(x, y, n, t, ci, co, w) \land (t = developer) \rightarrow \mathbf{Developer}(n)$

## **VGChartz**

- m4)  $\forall id. \forall g. \forall c. \forall pub. \forall dev. \forall s. \forall y. \mathbf{vgsales}(id, g, c, pub, dev, s, y)$ 
  - $\rightarrow \exists ge. \mathbf{Videogame}(g, ge) \land \mathbf{Console}(c) \land \exists us. \exists cs. \mathbf{ReleasedFor}(g, c, us, cs, s, y)$
- m5)  $\forall id. \forall g. \forall c. \forall pub. \forall dev. \forall s. \forall y. \mathbf{vgsales}(id, g, c, pub, dev, s, y) \land \neg (pub = NULL)$ 
  - $\rightarrow \exists w. \mathbf{SoftwareHouse}(pub, w) \land \mathbf{Publisher}(pub) \land \mathbf{publish}(pub, g)$
- $m6) \ \forall id. \forall g. \forall c. \forall pub. \forall dev. \forall s. \forall y. \mathbf{vgsales}(id, g, c, pub, dev, s, y) \land \neg (dev = NULL)$ 
  - $\rightarrow \exists w. \mathbf{SoftwareHouse}(dev, w) \land \mathbf{Developer}(dev) \land \mathbf{develop}(dev, g)$

#### Metacritic

- m7)  $\forall t. \forall g. \mathbf{datagenreX}(t, g) \rightarrow \mathbf{Videogame}(t, g)$
- m8)  $\forall t. \forall us. \forall ms. \forall p. \forall r. \mathbf{metacritic}(t, us, ms, p, r)$ 
  - $\rightarrow \exists ge. \mathbf{Videogame}(t, ge) \land \mathbf{Console}(p) \land \exists us. \exists s. \exists y \mathbf{ReleasedFor}(t, p, us, ms, s, y)$
- $m9) \ \forall t. \forall us. \forall ms. \forall p. \forall r. \mathbf{metacritic}(t, us, ms, p, r) \land \neg (us = tdb) \rightarrow \exists s. \exists y \mathbf{ReleasedFor}(t, p, us, ms, s, y)$
- m10)  $\forall t. \forall us. \forall ms. \forall p. \forall r. \mathbf{metacritic}(t, us, ms, p, r) \land \neg \exists id. \exists pub. \exists dev. \exists s. \exists y. \mathbf{vgsales}(id, t, p, pub, dev, s, y) \rightarrow \exists us. \exists s. \exists y. \mathbf{ReleasedFor}(t, p, us, ms, s, y)$

### Corgis

- m11)  $\forall t. \forall g. \forall p. \forall c. \mathbf{spvg}(t, g, p, c) \land \neg (p = NULL) \rightarrow \mathbf{SoftwareHouse}(p) \land \mathbf{Publisher}(p) \land \mathbf{publish}(p, t)$
- m12)  $\forall t. \forall g. \forall p. \forall c. \mathbf{spvg}(t, g, p, c) \rightarrow \exists ge. \mathbf{Videogame}(t, ge) \land \mathbf{Console}(c)$
- m13)  $\forall t. \forall g. \forall p. \forall c. \mathbf{spvg}(t, g, p, c) \land \neg \exists ge. \mathbf{datagenreX}(t, ge) \rightarrow \mathbf{Videogame}(t, g)$

#### eSport data

- m14)  $\forall g. \forall r. \forall ge. \forall te. \forall oe. \forall pp. \forall tt. \mathbf{generalED}(g, r, ge, te, oe, pp, tt) \rightarrow \exists ge. \mathbf{Videogame}(g, ge)$
- m15)  $\forall g. \forall r. \forall ge. \forall te. \forall oe. \forall pp. \forall tt. \mathbf{generalED}(g, r, ge, te, oe, pp, tt) \land \dots$ 
  - ...  $\land \neg \exists ge'. \forall p. \forall c. \mathbf{spvg}(g, ge', p, c) \land \neg \exists ge''. \mathbf{datagenreX}(g, ge'') \rightarrow \mathbf{Videogame}(g, ge)$
- m16)  $\forall g. \forall r. \forall ge. \forall te. \forall oe. \forall pp. \forall tt. \mathbf{generalED}(g, r, ge, te, oe, pp, tt) \rightarrow \mathbf{eSport}(g, te, oe)$
- m17)  $\forall d. \forall g. \forall e. \forall pp. \forall ne. \mathbf{historicalED}(d, g, e, pp, ne) \rightarrow \mathbf{Tournament}(d, g, e, pp, ne)$

# Mapping by Entity

## SoftwareHouse, Publisher, Developer, Location

- m1)  $\forall x. \forall y. \forall n. \forall t. \forall ci. \forall co. \forall w. \mathbf{gamedev}(x, y, n, t, ci, co, w)$  $\rightarrow \mathbf{SoftwareHouse}(n, w) \land \mathbf{locatedIn}(n, ci, x, y) \land \mathbf{Location}(ci, co)$
- m2)  $\forall x. \forall y. \forall n. \forall t. \forall ci. \forall co. \forall w. \mathbf{gamedev}(x, y, n, t, ci, co, w) \land (t = publisher) \rightarrow \mathbf{Publisher}(n)$
- m3)  $\forall x. \forall y. \forall n. \forall t. \forall ci. \forall co. \forall w. \mathbf{gamedev}(x, y, n, t, ci, co, w) \land (t = developer) \rightarrow \mathbf{Developer}(n)$
- m4)  $\forall id. \forall g. \forall c. \forall pub. \forall dev. \forall s. \forall y. \mathbf{vgsales}(id, g, c, pub, dev, s, y) \land \neg (pub = NULL)$ 
  - $\rightarrow \exists w. \mathbf{SoftwareHouse}(pub, w) \land \mathbf{Publisher}(pub) \land \mathbf{publish}(pub, g)$
- $m5) \ \forall id. \forall g. \forall c. \forall pub. \forall dev. \forall s. \forall y. \mathbf{vgsales}(id, g, c, pub, dev, s, y) \land \neg (dev = NULL)$ 
  - $\rightarrow \exists w. \mathbf{SoftwareHouse}(dev, w) \land \mathbf{Developer}(dev) \land \mathbf{develop}(dev, g)$
- m6)  $\forall t. \forall g. \forall p. \forall c. \mathbf{spvg}(t, g, p, c) \land \neg (p = NULL) \rightarrow \mathbf{SoftwareHouse}(p) \land \mathbf{Publisher}(p) \land \mathbf{publish}(p, t)$

## Videogame, Console, ReleasedFor

- m7)  $\forall id. \forall g. \forall c. \forall pub. \forall dev. \forall s. \forall y. \mathbf{vgsales}(id, g, c, pub, dev, s, y)$  $\rightarrow \exists ge. \mathbf{Videogame}(g, ge) \land \mathbf{Console}(c) \land \exists us. \exists cs. \mathbf{ReleasedFor}(g, c, us, cs, s, y)$
- m8)  $\forall t. \forall g. \mathbf{datagenreX}(t, g) \rightarrow \mathbf{Videogame}(t, g)$
- m9)  $\forall t. \forall us. \forall ms. \forall p. \forall r. \mathbf{metacritic}(t, us, ms, p, r)$  $\rightarrow \exists ge. \mathbf{Videogame}(t, ge) \land \mathbf{Console}(p) \land \exists us. \exists s. \exists y \mathbf{ReleasedFor}(t, p, us, ms, s, y)$
- m10)  $\forall t. \forall us. \forall ms. \forall p. \forall r. \mathbf{metacritic}(t, us, ms, p, r) \land \neg (us = tdb) \rightarrow \exists s. \exists y \mathbf{ReleasedFor}(t, p, us, ms, s, y)$
- m11)  $\forall t. \forall us. \forall ms. \forall p. \forall r. \mathbf{metacritic}(t, us, ms, p, r) \land \neg \exists id. \exists pub. \exists dev. \exists s. \exists y. \mathbf{vgsales}(id, t, p, pub, dev, s, y) \rightarrow \exists us. \exists ms. \exists s. \mathbf{ReleasedFor}(t, p, us, ms, s, r)$
- m12)  $\forall t. \forall g. \forall p. \forall c. \mathbf{spvg}(t, g, p, c) \rightarrow \exists ge. \mathbf{Videogame}(t, ge) \land \mathbf{Console}(c)$
- m13)  $\forall t. \forall g. \forall p. \forall c. \mathbf{spvg}(t, g, p, c) \land \neg \exists ge. \mathbf{datagenreX}(t, ge) \rightarrow \mathbf{Videogame}(t, g)$
- m14)  $\forall g. \forall r. \forall ge. \forall te. \forall oe. \forall pp. \forall tt. \mathbf{generalED}(g, r, ge, te, oe, pp, tt) \rightarrow \exists ge'. \mathbf{Videogame}(g, ge')$
- m15)  $\forall g. \forall r. \forall ge. \forall te. \forall oe. \forall pp. \forall tt. \mathbf{generalED}(g, r, ge, te, oe, pp, tt) \wedge ...$ ...  $\land \neg \exists ge'. \forall p. \forall c. \mathbf{spvg}(g, ge', p, c) \land \neg \exists ge''. \mathbf{datagenreX}(g, ge'') \rightarrow \mathbf{Videogame}(g, ge)$

### eSport, Tournament

- m16)  $\forall g. \forall r. \forall ge. \forall te. \forall oe. \forall pp. \forall tt. \mathbf{generalED}(g, r, ge, te, oe, pp, tt) \rightarrow \mathbf{eSport}(g, te, oe)$
- m17)  $\forall d. \forall q. \forall e. \forall pp. \forall ne. \mathbf{historicalED}(d, q, e, pp, ne) \rightarrow \mathbf{Tournament}(d, q, e, pp, ne)$