My database is for storing information about the different units in Hawk Wargames Dropzone Commander, which is a table top war game. I will be focusing on the original book released which detailed 4 factions, but since that time more has been released, including an entire new faction, and it seems very likely more will be released in the future. Each faction has its own roster of units it can draw from to make a force. Each faction also has a different way of grouping their units based on unit categories. Also, the factions have their own weaponry, but it not uncommon to see the same weapon mounted on different vehicles. This database could be used for army list creation, reference, and scoring, as at the end of game counting the point cost of units destroyed as well as sometimes counting the point cost of units within a certain area of the table determine the victor.
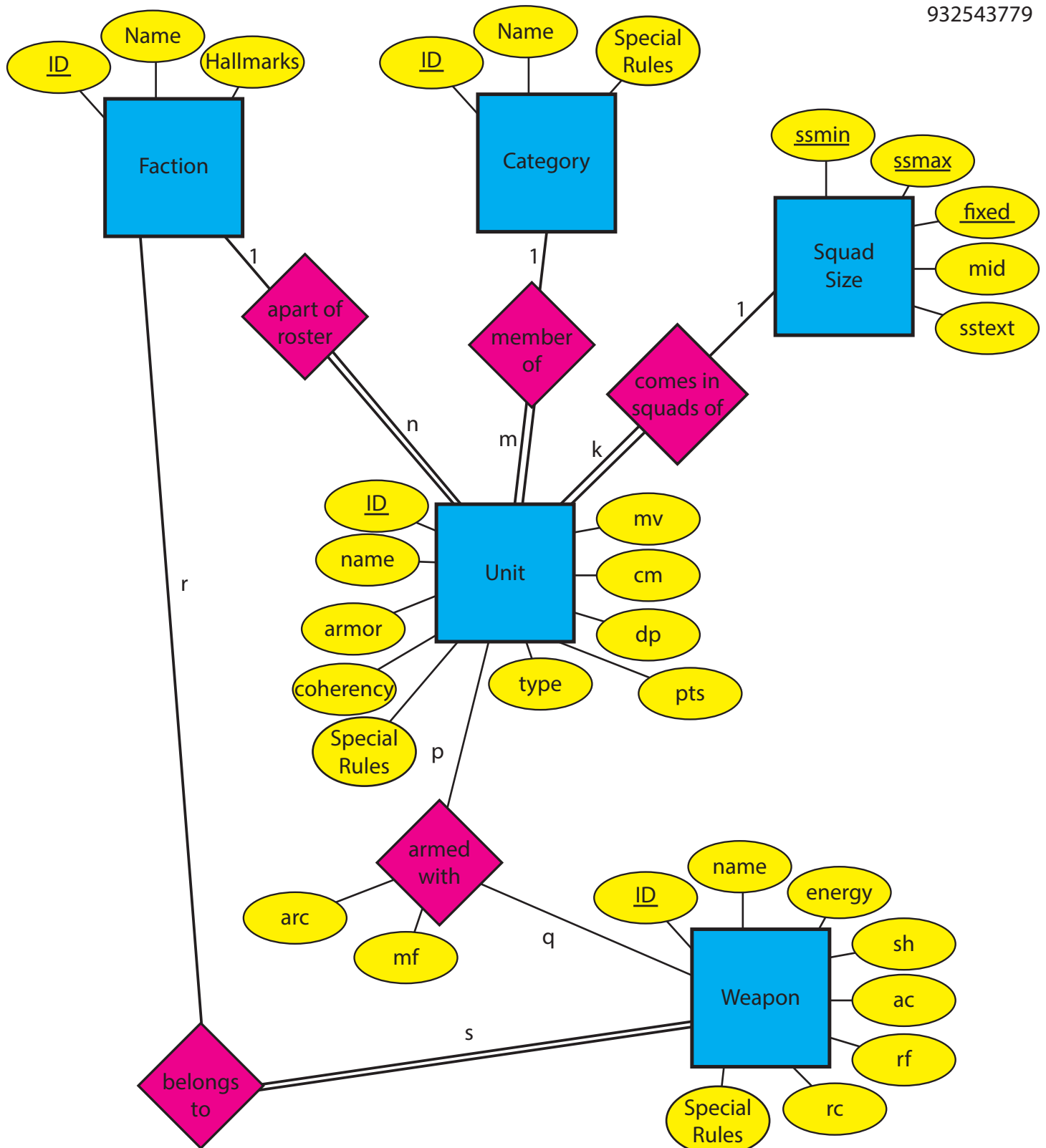
Every faction is composed of units, and each unit belongs to one faction. Factions have a name and hallmarks of their playstyle.

Every unit belongs to one faction, and has a name, and stats for armor, movement, countermeasures, damage points, points, type, category, squad size, and coherency. Some units also have additional special rules.

Units have a category which is used in roster creation. These categories sometimes have some special rules for being of that category of units (ie – Scout).

Units are formed together into squads. Some units have a fixed number(s) where as other have a range with a minimum and maximum number of units that can be in one squad.

Nearly all units have at least one weapon, and some have many. Weapons have a name, and stats for energy, shots, accuracy, range full, range countered, and arc of fire. Some weapons also have additional special rules. Many weapons belong to many units, and many units have many weapons. This is my many-to-many relationship.
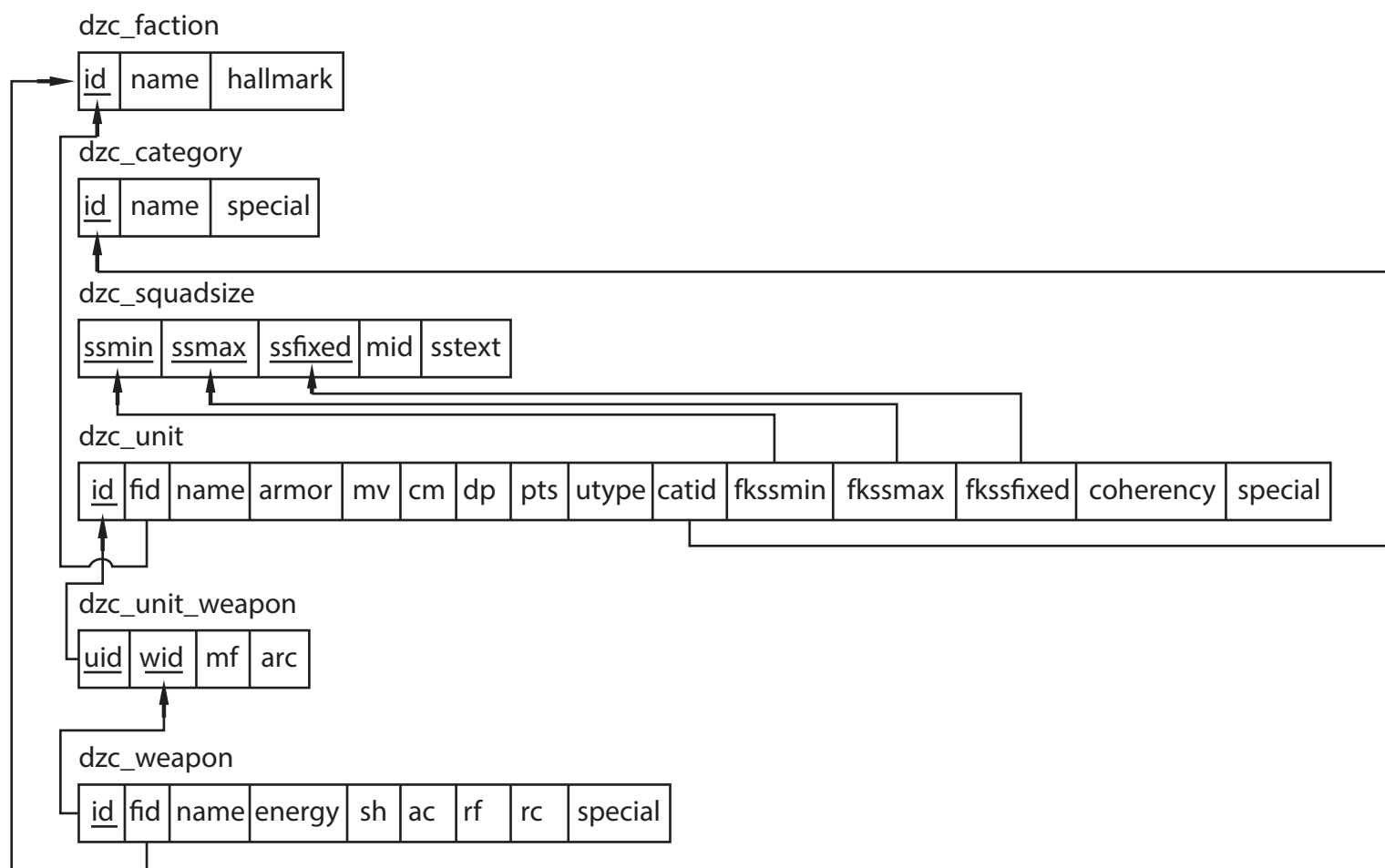
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Faction
- ID
- Name
- Hallmarks

Category
- ID
- Name
- Special Rules

Squad Size
- ssmin
- ssmax
- fixed
- mid
- sstext

Unit
- ID
- name
- armor
- coherency
- Special Rules
- mv
- cm
- dp
- type
- pts

Weapon
- ID
- name
- energy
- sh
- ac
- rf
- rc
- Special Rules
- arc
- mf

Relationships:
- Faction —1— apart of roster —n— Unit
- Category —1— member of —m— Unit
- Squad Size —1— comes in squads of —k— Unit
- Unit —p— armed with —q— Weapon
- Faction —r— belongs to —s— Weapon

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dzc_faction

id	name	hallmark

dzc_category

id	name	special

dzc_squadsize

ssmin	ssmax	ssfixed	mid	sstext

dzc_unit

id	fid	name	armor	mv	cm	dp	pts	utype	catid	fkssmin	fkssmax	fkssfixed	coherency	special

dzc_unit_weapon

uid	wid	mf	arc

dzc_weapon

id	fid	name	energy	sh	ac	rf	rc	special

Table Creation Queries

CREATE TABLE dzc_faction (

        id int(4) NOT NULL AUTO_INCREMENT,

        name varchar(255) NOT NULL,

        hallmark varchar(255),

        PRIMARY KEY (id),

        UNIQUE KEY (name)

) ENGINE=InnoDB;

CREATE TABLE dzc_category (

        id int(4) NOT NULL AUTO_INCREMENT,

        name varchar(255) NOT NULL,

        special varchar(255),

        PRIMARY KEY (id),

        UNIQUE KEY (name)

) ENGINE=InnoDB;

CREATE TABLE dzc_squadsize (

        ssmin int(3) NOT NULL,

        ssmax int(3) NOT NULL,

        ssfixed BOOLEAN NOT NULL,

        mid int(3),

        sstext varchar(255) NOT NULL,

        PRIMARY KEY (ssmin,ssmax,ssfixed)

) ENGINE=InnoDB;

```
CREATE TABLE dzc_unit (

        id int(4) NOT NULL AUTO_INCREMENT,

        fid int(4),

        name varchar(255) NOT NULL,

        armor int(3) NOT NULL,

        mv int(3) NOT NULL,

        cm varchar(25),

        dp int(3) NOT NULL,

        pts int(4),

        utype varchar(25) NOT NULL,

        catid int(4),

        fkssmin int(3),

        fkssmax int(3),

        fkssfixed BOOL,

        coherency varchar(25) NOT NULL,

        special varchar(255),

        PRIMARY KEY (id),

        UNIQUE KEY (name),

        FOREIGN KEY (fid) REFERENCES dzc_faction (id) ON DELETE SET NULL ON UPDATE CASCADE,

        FOREIGN KEY (catid) REFERENCES dzc_category (id) ON DELETE SET NULL ON UPDATE CASCADE,

        FOREIGN KEY (fkssmin,fkssmax,fkssfixed) REFERENCES dzc_squadsize (ssmin,ssmax,ssfixed) ON
DELETE SET NULL ON UPDATE CASCADE

) ENGINE=InnoDB;
```

```
CREATE TABLE dzc_weapon (

        id int(4) NOT NULL AUTO_INCREMENT,

        fid int(4),

        name varchar(255) NOT NULL,

        energy int(3),

        sh int(3) NOT NULL,

        ac int(3) NOT NULL,

        rf int(3),

        rc int(3),

        special varchar(255),

        PRIMARY KEY (id),

        UNIQUE KEY (name),

        FOREIGN KEY (fid) REFERENCES dzc_faction (id) ON DELETE SET NULL ON UPDATE CASCADE

) ENGINE=InnoDB;


CREATE TABLE dzc_unit_weapon (

        uid int(4),

        wid int(4),

        mf int(3) NOT NULL,

        arc varchar(25) NOT NULL,

        PRIMARY KEY (uid,wid,arc),

        FOREIGN KEY (uid) REFERENCES dzc_unit (id) ON DELETE CASCADE ON UPDATE CASCADE,

        FOREIGN KEY (wid) REFERENCES dzc_weapon (id) ON DELETE CASCADE ON UPDATE CASCADE

) ENGINE=InnoDB;
```

General Use Queries

SELECT f.name, f.hallmark FROM dzc_faction f

SELECT c.name, c.special FROM dzc_category c

SELECT ss.ssmin, ss.ssmax, ss.ssfixed, ss.mid FROM dzc_squadsize ss

SELECT ssmin,ssmax,ssfixed,sstext FROM dzc_squadsize

SELECT name from dzc_faction WHERE id=['faction']

SELECT f.id, u.id, f.name, u.name, u.armor, u.mv, u.cm, u.dp, u.pts, u.utype, c.name, ss.sstext, u.coherency, u.special

FROM dzc_faction f INNER JOIN

dzc_unit u ON u.fid=f.id INNER JOIN

dzc_category c ON c.id=u.catid INNER JOIN

dzc_squadsize ss ON ss.ssmin=u.fkssmin AND ss.ssmax=u.fkssmax AND ss.ssfixed=u.fkssfixed

WHERE f.id=['faction']

ORDER BY u.id

SELECT f.id, w.id, w.name, w.energy, w.sh, w.ac, w.rf, w.rc, w.special

FROM dzc_faction f INNER JOIN

dzc_weapon w ON w.fid=f.id

WHERE f.id=['faction']

GROUP BY w.id

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SELECT f.id, u.id, f.name, u.name, u.armor, u.mv, u.cm, u.dp, u.pts, u.utype, c.name, ss.sstext, u.coherency, u.special,

w.id, w.name, w.energy, w.sh, w.ac, w.rf, w.rc, uw.mf, uw.arc, w.special

FROM dzc_faction f INNER JOIN

dzc_unit u ON u.fid=f.id INNER JOIN

dzc_category c ON c.id=u.catid INNER JOIN

dzc_squadsize ss ON ss.ssmin=u.fkssmin AND ss.ssmax=u.fkssmax AND ss.ssfixed=u.fkssfixed INNER JOIN

dzc_unit_weapon uw ON uw.uid=u.id INNER JOIN

dzc_weapon w ON w.id = uw.wid

WHERE f.id=" ['faction'] . "

ORDER BY u.id, w.id

INSERT INTO dzc_category(name, special) VALUES (['categoryName'],['categorySpecial'])

INSERT INTO dzc_faction(name, hallmark) VALUES (['factionName'],['factionHallmark'])

INSERT INTO dzc_squadsize(ssmin, ssmax, ssfixed, mid, sstext) VALUES (['ssMin'],['ssMax'],[$fixed],['ssMid'],[$sstext])

INSERT INTO dzc_unit(fid, name, armor, mv, cm, dp, pts, utype, catid, fkssmin, fkssmax, fkssfixed, coherency, special) VALUES (['faction'],['unitName'],['armor'],['mv'],['cm'],['dp'],['pts'],['utype'],['category'],[$ss],['coherency'],['special'])

INSERT INTO dzc_unit_weapon(uid, wid, mf, arc) VALUES (['unit'],['weapon'],['mf'],['arc'])

INSERT INTO dzc_weapon(fid, name, energy, sh, ac, rf, rc, special) VALUES (['faction'],['weaponName'],['energy'],['sh'],['ac'],['rf'],['rc'],['special'])

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DELETE FROM dzc_category WHERE id=['category']

DELETE FROM dzc_faction WHERE id=['faction']

DELETE FROM dzc_squadsize WHERE ssmin=[min] AND ssmax=[max] AND ssfixed=[fixed Bool]

DELETE FROM dzc_unit WHERE id=['uid']

DELETE FROM dzc_unit_weapon WHERE uid=['uid']

DELETE FROM dzc_weapon WHERE id=['wid']

DELETE FROM dzc_unit_weapon WHERE wid=['wid']

DELETE FROM dzc_unit_weapon WHERE uid=['uid'] AND wid=['wid'] AND arc=['arc']

UPDATE dzc_category c SET c.name=(?) WHERE c.id=['category']

UPDATE dzc_category c SET c.special=(?) WHERE c.id=['category']

UPDATE dzc_faction f SET f.name=(?) WHERE f.id=['faction']

UPDATE dzc_faction f SET f.hallmark=(?) WHERE f.id=['faction']