**PK**

**Satellite** (Name, Launch\_Date, Launch\_Rocket, PositionDegree, PositionDirection, Region) removed launch site

**PK**

**SatelliteRegion** (SatName, Region) Removed

**FK(Satellite)**

**PK**

**Channel** (Name, Website)

**PK**

**ChannelRelatedChannels** (ChannelName, RelatedChannels) Removed

**FK(Channel)**

**PK**

**ChannelCountry** (ChannelName, Countries)

**FK(Channel)**

**PK**

**SatelliteChannel** (SatName, ChannelName, Frequency, Beam, SR, VideoEncod, FEC, ERIP, System)

**FK(Satellite)**

**FK(Channel)**

**PK**

**SatelliteChannelLanguage** (SatName, ChannelName, Frequency, Language)

**FK(SatelliteChannel)**

**PK**

**SatelliteChannelEncryption** (SatName, ChannelName, Frequency, Encryption)

**FK(SatelliteChannel)**

**PK**

**Network** (Name, Website)

**PK**

**NetworkCountries** (NetworkName, Countries)

**FK(Network)**

**PK**

**BelongsTo** (NetworkName, ChannelName)

**FK(Network)**

**FK(Channel)**

**PK**

**Contains** (SatName, NetName)

**FK(Network)**

**FK(Satellite)**

**PK**

**User** (Email, Username, Gender, Birthdate, Location, Region)

**PK**

**FK(Channel)**

**Favorite** (UserEmail, ChannelName)

**FK(User)**

Assumptions:

1. If Language is null on website, we will take it as default: eng not a null value.
2. If Related channels are null on website, we will take it as default: None not a null value.
3. If Encryption is null on website, we will take as default: None not a null value.
4. If Countries are null on website, we will take as default: None not a null value.
5. If Region is null on website, we will take as default: None not a null value.
6. SatelliteChannel is not a specific object and does not have its own existence, so it is a weak entity.
7. A channel name is unique and cannot be repeated.
8. SR, VideoEncoding, FEC, ERIP, System can be null (Found examples supporting this).
9. Satellite can occupy same region simultaneously.
10. Channel System not multi-valued, (DVB-S2 8PSK) is one value.

