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## Data Dictionary

Entity Name	Description	Aliases	Occurrence
3D_Sensor	A Spaces 3D sensor	Sensor,	Created by the company.
Supplier	Supplier of sensor parts	Store,	From reaching out to acquire parts for the devices.
Video	Stream of video to the 3D sensor	Stream,	Stream from the sensor.
Subscriber	A spaces customer	Customer, User, Client	From a subscription being sold to a customer.
Zone	Location in which a 3D sensor is set up	Area, Location,	Designated by the company
Contract	Type of contract a subscriber can hold	Subscription, Plan	Created by the company.

Data	Collected Spaces data	Recording, Voice, Audio,	Collected from the sensor
Staff	Spaces employee (Executive, Salesperson, manager)	Staff member, employee	From the company staff database.

Below are the roles that a staff entity can have

Executive	A special member of staff that can alter subscription details	Staff	From the company hiring or having an executive.
Salesperson	Person to handle subscription sales.	Staff	From the company hiring a salesperson.
Manager	Manager of the branch	Staff	From the company hiring a manager

## Relationships

Entity Name	Cardinality	Participation	Relationship	Participation	Cardinality	Entity Name
3D_Sensor	One		One to Many		Many	Video (Stream)
Staff	One		One to Many		Many	Contract, 3D_Sensor, Zone
Supplier	One		One to Many		Many	3D_Sensor
Video	Many		Many to Many		Many	Zone
Data	One		One to One		One	3D_Sensor, Zone
Subscriber	One		One to Many		Many	Contract
Zone	many		Many to Many		Many	Videos
Contract	One		One to One		One	Subscriber

## Entities

These are the entities in the data dictionary expanded.

### 3D Sensor

Entity Name	Attribute	Description	Domain	Aliases	Composite	Derived	Null	Key	Default value
3D_Sensor	Sensor_ID	ID of the sensor	Integer	Sensor		no	No	PK	Auto_Increment
	Latitude	The latitude measurement of the sensor	Varchar, Must follow standard Latitude notation	Latitude		no	No	-	null
	Altitude	The altitude measurement of the sensor	Varchar, Must follow standard Altitude notation	Altitude		no	No	-	Null
	Longitude	The longitude measurement of the sensor	Varchar, Must follow standard Longitude notation	Longitude		no	No	-	Null
	Location	Location of the sensor	Varchar	Location		yes	No	-	Null
	Backup_Data	Data stored on device in case database fails.	Varchar	Backup		yes	Yes	-	Null

	Staff_ID	The staff member responsible for the device	int	Staff		no	no	FK	Null
	Supplier_ID	The supplier and maintainer of the sensor	int	Supplier		no	no	FK	Null

### Staff

Entity Name	Attribute	Description	Domain	Aliases	Composite	Derived	Null	Key	Default value
Staff	Staff_ID	ID of the sensor	Integer	Staff_ID		no	No	PK	Auto_Increment
	Role	Role In the company	Varchar that describes the role (executive, salesperson, manager etc.)	Position		no	No	-	null
	Manager_ID	Manager of this staff member	Integer	Manager		no	Yes	FK	Null
	Branch	The branch that the staff member works at	Varchar			no	No	FK	Null
	First_Name	First Name of the staff member	Varchar			no	No	-	Null

	Last_Name	Last Name of the staff member	Varchar			no	No	-	Null
	Phone_Number	Contact phone number for the staff member	Varchar			no	Yes	-	Null
	Email_Address	Contact Email for the staff member	varchar			no	Yes	-	Null

### Subscriber

Entity Name	Attribute	Description	Domain	Aliases	Composite	Derived	Null	Key	Default value
Subscriber	Subscriber_ID	ID of the sensor	Integer	Subscriber_ID		no	No	PK	Auto_Increment
	First_Name	Subscriber First Name	Varchar	First Name		no	No	-	null
	Last_Name	Subscriber Last Name	Varchar	Last Name		no	Yes	FK	Null
	Email_Address	Subscriber email	Varchar	Contact		no	No	FK	Null
	Phone_Number	Subscriber phone number	Varchar	Contact		no	Yes	-	Null
	Street	Street address of subscriber	Varchar	Address		no	No	-	Null

	City	City of the subscriber	Varchar	Town		no	No	-	Null
	Postal_Code	Postal Code of the subscriber	Varchar	Zip code		no	No		Null
	Subscription_Status	The status of the subscribers subscription (active/not active)	Varchar	Active subscriber		yes	No		"Not Active"
	Plan	The plan the subscriber is on	Varchar	tier		no	Yes		null
	Start_Date	Start date of subscription	Date			no	Yes		null
	End_Date	End date of subscription	Date			no	Yes		null

### Supplier

Entity Name	Attribute	Description	Domain	Aliases	Composite	Derived	Null	Key	Default value
Supplier	Supplier_ID	ID of the Supplier	Integer	Supplier		no	No	PK	Auto_Increment
	Supplier_Name	Name of the supplier	Varchar	Name		no	No	-	null

	Supplier_Email	Contact Email for supplier	Varchar	Email		no	No	-	Null
	Supplier_Phone	Contact phone number for the supplier	Varchar	Phone Number		no	Yes	-	Null
	Address	Address of the supplier	Varchar	Address		no	No	-	Null
	City	City of the supplier	Varchar	City		no	No	-	Null
	Postal_Code	Postal code of the supplier	Varchar	Zip Code		no	no	-	Null

## Video

Entity Name	Attribute	Description	Domain	Aliases	Composite	Derived	Null	Key	Default value
Video	Video_ID	ID for each video	Integer	Video_ID		no	No	PK	Auto_Increment
	3D_Sensor_ID	ID for the 3D Sensor used to view the video						FK	
	Title	Title of the video	Varchar	Title		no	No	-	"Unnamed"
	Description	Description of the video	Varchar	About, Bio		no	Yes	-	Null
	Release_date	Release date of the video	Date	Release date		no	No	-	Null

	Genre	Genre of the video	Varchar	Type, Genre, Category		no	No	-	Null
	Duration	Duration of the video in minutes	int	Runtime, Length		no	No	-	Null
	Director	Name of the video director	Varchar	Director		no	No	-	Null
	Production_company	Name of the production company of the video	Varchar	Producer(s)		no	No	-	Null
	Rental_Date	Date for subscriber renting the video	Date	Rental Date		no	Yes		Null
	Return_Date	Date for the subscriber returning the video	Date	Return Date		no	Yes		Null

## Data

Entity Name	Attribute	Description	Domain	Aliases	Composite	Derived	Null	Key	Default value
Data	Data_ID	ID of the data	Integer	Data_ID		no	No	PK	Auto_Increment
	Subscriber_ID	ID of the subscriber associated with the data	Integer	Subscriber		no	No	FK	Null



	Video_ID	ID of the video associated with the data	Integer	Video		no	No	FK	Null
	Date	Date when the data was recorded	date	Date recorded		no	No	-	Null
	Views	Number of views the associated video gained	Varchar	Views		no	Yes	-	Null
	Clicks	Number of clicks the associated video received	Varchar	Interactions		no	Yes	-	Null
	Conversions	Number of people that have signed up resulting from associated video	Integer	New members		no	Yes	-	Null
	Revenue	Total revenue by the associated video	float	Profit		no	Yes	-	Null
	Cost	Total cost of producing and promoting associated video	float	Cost		no	No	-	Null

### Zone

Entity Name	Attribute	Description	Domain	Aliases	Composite	Derived	Null	Key	Default value
Zone	Zone_ID	ID of the sensor	Integer	Staff_ID		no	No	PK	Auto_Increment

	Name	Role In the company	Varchar that describes the role (executive, salesperson, manager etc.)	Position		no	No	-	Null
	City	Manager of this staff member	Integer	Manager		no	Yes	-	Null
	Region	The branch that the staff member works at	Integer	Location		no	No	-	Null
	Postal_Code	First Name of the staff member	Varchar	Zip		no	No	-	Null
	Staff_Id	Staff member in charge of the zone	int	staff		no	no	FK	Null

### Contract

Entity Name	Attribute	Description	Domain	Aliases	Composite	Derived	Null	Key	Default value
Contract	Contract_ID	ID of the Contract	Integer	Data_ID		no	No	PK	Auto_Increment
	Subscriber_ID	ID of the subscriber associated with the contract	Integer	Subscriber		no	No	FK	Null

	Salesperson_ID	ID of the staff member selling the contract						FK	Null
	Video_Limit	Max number of videos allowed on the contract	int	Date recorded		no	No	-	Null
	Data_Limit	Max ammount of data allowed on the contract	Varchar	Views		no	No	-	Null
	Zone_ID	FK referencing the zone associated with this contract	Varchar	Interactions		no	No	-	Null
	Start_Date	Date the contract begins	Integer	New members			No	-	Null
	End_Date	Date the contract ends	float	Profit		no	No	-	Null
	Monthly_Fee	Monthly fee for this contract	float	Cost			No	-	Null