



CALIFORNIA
J · P · I · A

Enterprise Database Software Evaluation

Conceptual Enterprise Data Model

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Working Document



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August 4, 2008	1.0	Draft document for CJPIA review	Highlands Consulting Team
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1. Introduction

The Conceptual Enterprise Data Model (CEDM) is a high-level description of the data required to accomplish the functions required by the future Enterprise Database (EDB) application(s). It is presented in four parts:

Entity Relationship Model (ERM): An “entity” is a thing about which CJPIA collects data to use in business processes. The ERM is graphic representation of the entities and their relationships to each other. The CJPIA Entity Relationship Model displays all documented entities and relationships. The Member View, Event View, and Claim View depict subsets of the overall CJPIA Entity Relationship Model for review.

Entity Summary Table: Lists entities identified in the CJPIA Entity Relationship Model with a brief description and explanation of relationships. Notes are included with the description to provide extra information in some circumstances.

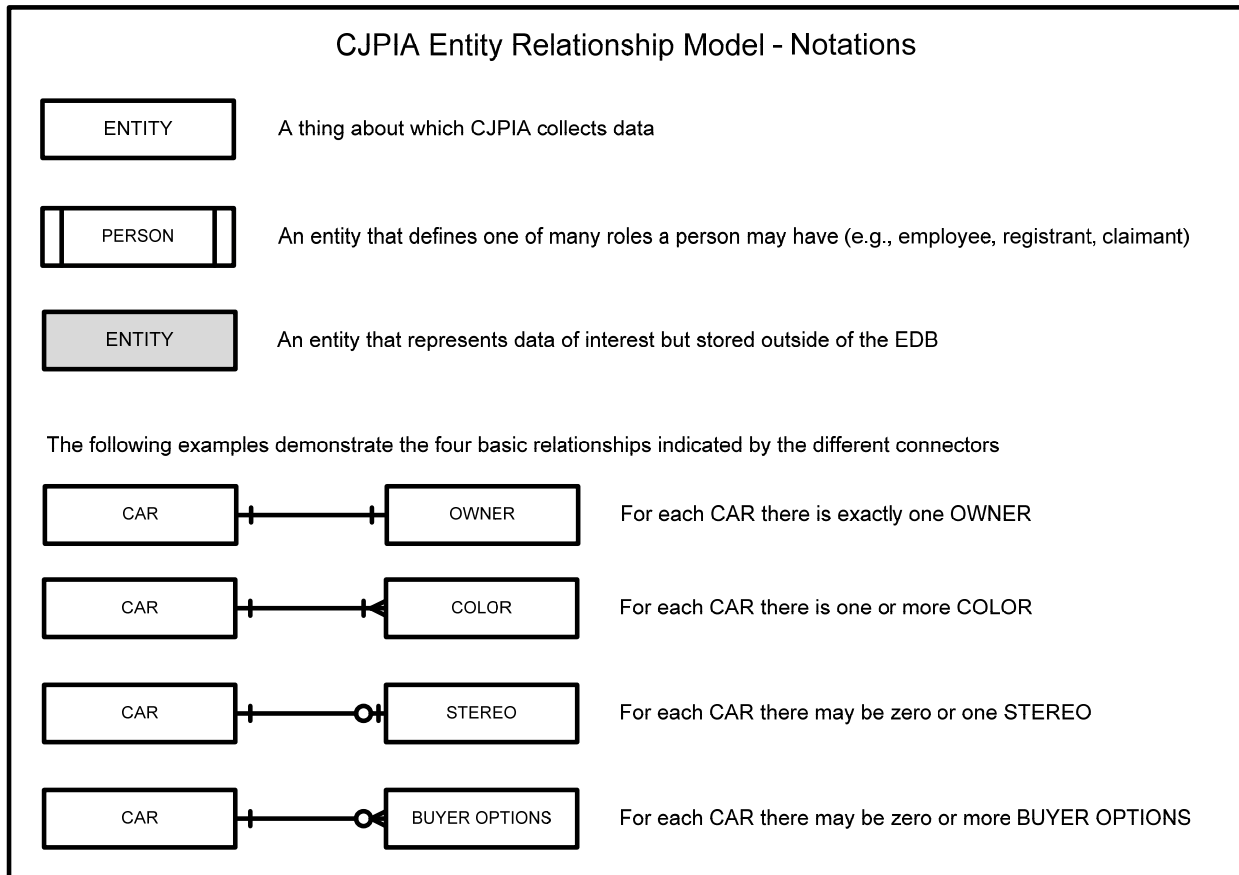
Entity Detail Table: Lists entities identified in the CJPIA Entity Relationship Model and defines how each instance of an entity is uniquely identified. It describes the most significant data associated with the entity and identifies which data links one entity to another.

Data Origination Table: Lists entities identified in the CJPIA Entity Relationship Model and defines where the data for each is originated as well as whether or not the data is likely to reside in the EDB.

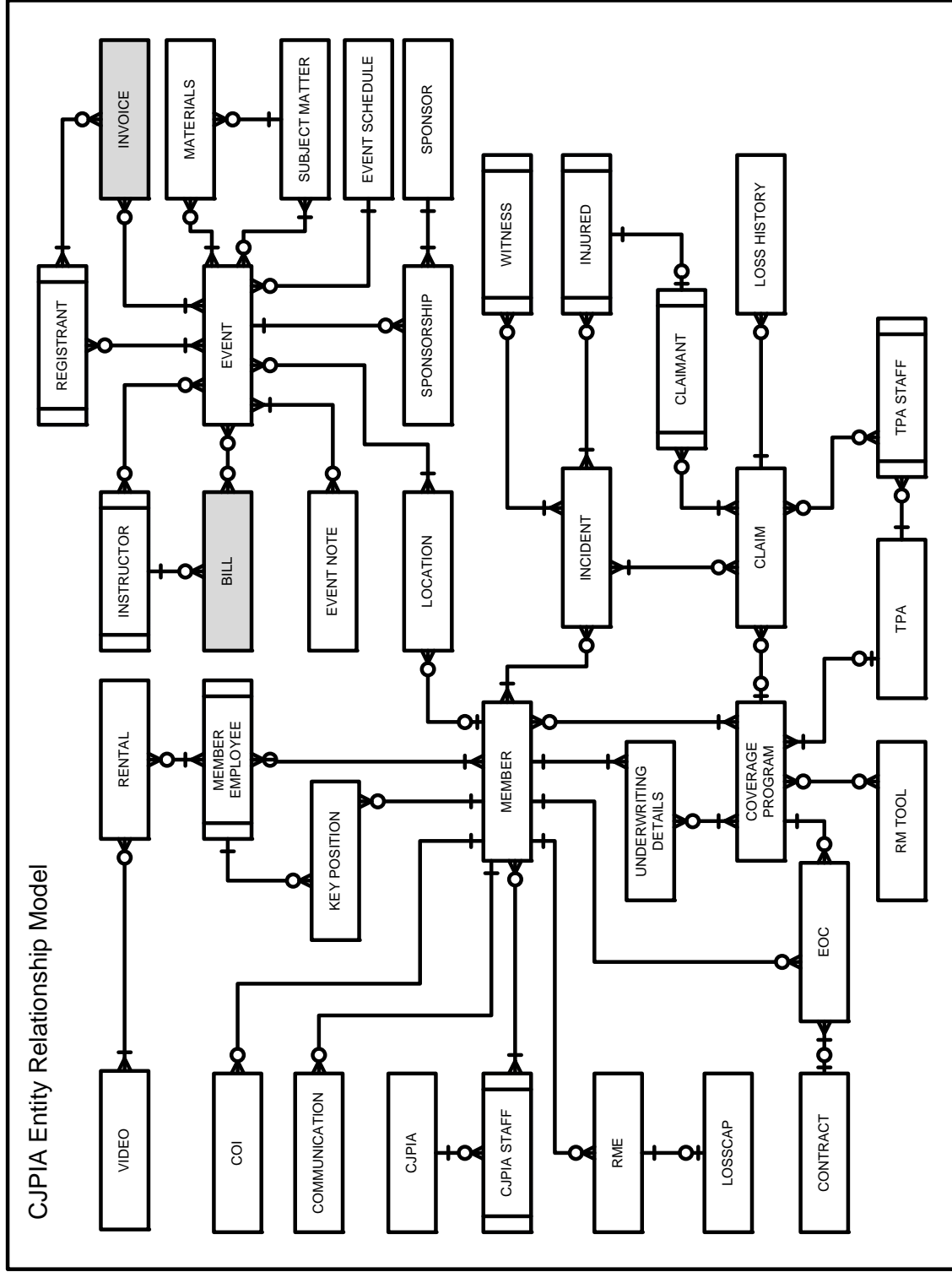
2. Entity Relationship Model (ERM)

2.1. Notations

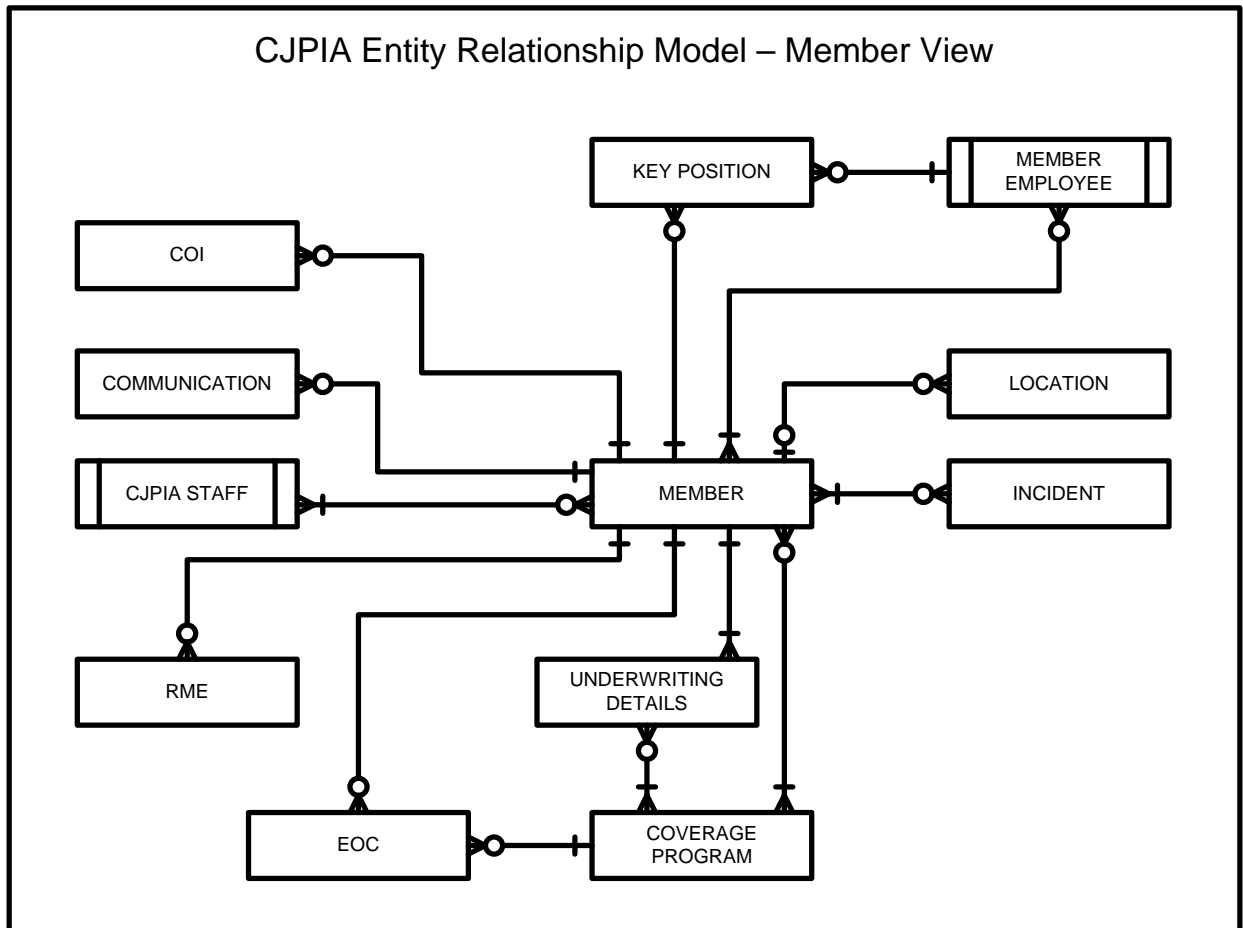
The following diagram explains how to interpret the ERM.



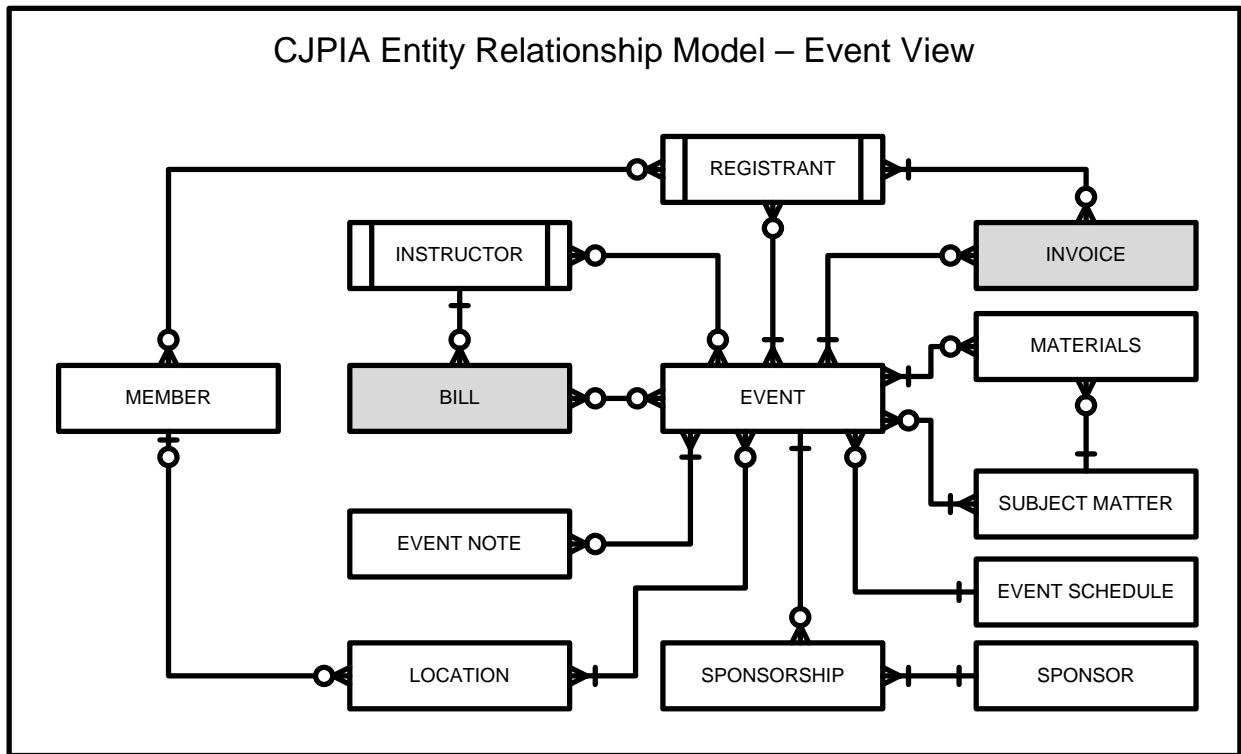
2.2. CJPIA Entity Relationship Model



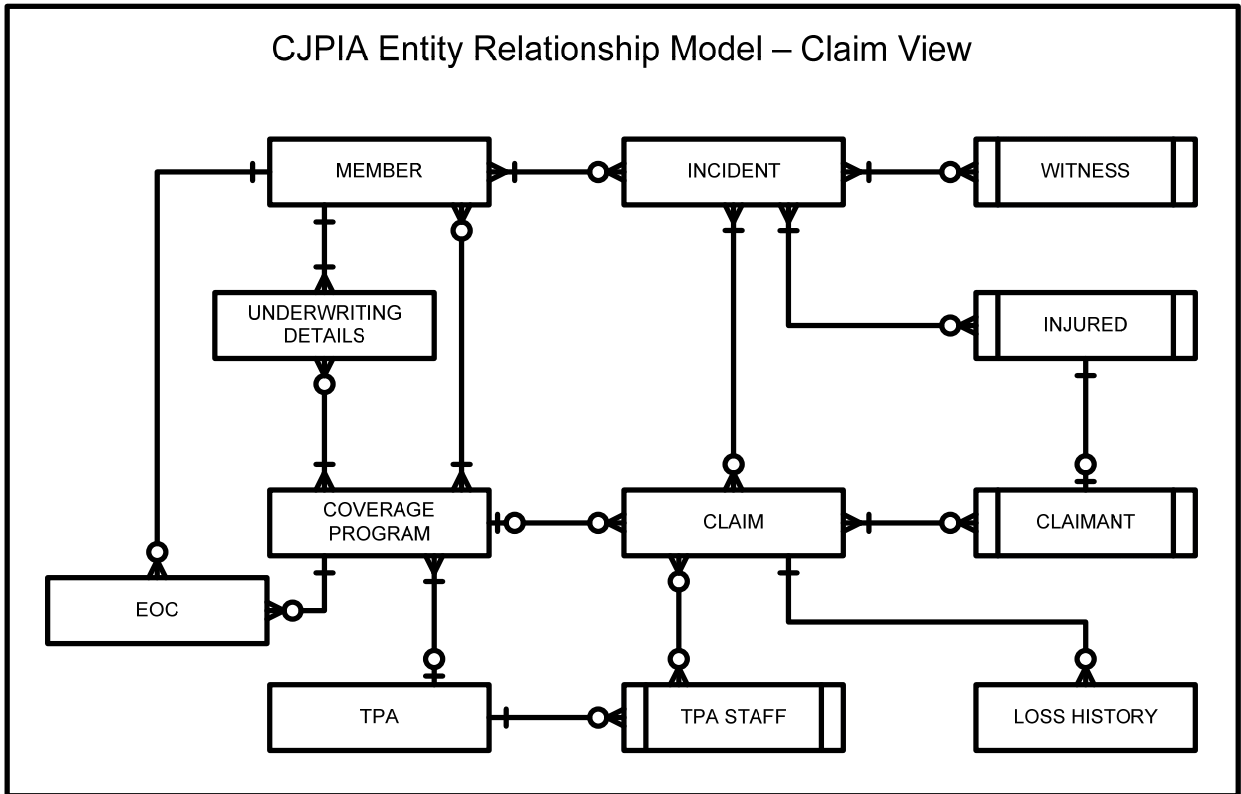
2.3. Member View



2.4. Event View



2.5. Claim View



3. Entity Summary Table

The following table describes the major entities and their relationships to each other. The “Relationships” column identifies the other entities that may or must exist for each instance of the entity in question. The table is listed in alphabetical order to facilitate references while reviewing the ERM.

Table 1 is not a comprehensive list of entities or all relationships. The most significant relationships are described here, while additional important relationships are demonstrated in Table 2 (where the “significant data” includes the unique identifiers of other entities).

Table 1 - Entity Summary Table

Entity	Description / Notes	Relationships
Bill	<p>Request for payment by an Instructor for training services rendered.</p> <p>Note: “Bill” refers to a request to CJPIA to pay another entity. “Invoice” refers to a CJPIA request for payment from another entity.</p> <p>Note: a Bill may be from someone other than an Instructor and may be for something other than an Event.</p> <p>Note: Currently, 4D does not collect Bill information and there is no plan to collect it in the EDB.</p>	<ul style="list-style-type: none"> • Must be from 1 Instructor • Must be for 1 or more Events
CJPIA	<p>The CJPIA itself.</p> <p>Note: This is one type of Organization.</p>	<ul style="list-style-type: none"> • Has 0 or more CJPIA Staff
CJPIA Staff	<p>Employee of CJPIA.</p> <p>Note: This is a person who may have other roles (e.g., Witness).</p> <p>Note: CJPIA Staff may be connected to various entities besides a member (e.g., Communication, Event)</p>	<ul style="list-style-type: none"> • Must be employed by 1 CJPIA • May be assigned to 0 or more Members (e.g., risk consultant)
Claim	<p>Request from any entity for compensation from a Member based on an Incident.</p> <p>Note: Though a Claim may be established without specifying a Claimant, this practice should be evaluated and possibly changed to require at least one Claimant (since formal filing is required to establish a Claim against a public entity).</p>	<ul style="list-style-type: none"> • Must be based on 1 or more Incident • May have 0 or more Claimants • May be documented by 0 or more Loss History • May be assigned to 0 or more TPA Staff • Must be covered by 1 Coverage Program

Table 1 - Entity Summary Table

Entity	Description / Notes	Relationships
Claimant	<p>Person who requests payment from a Member based on an Incident – this person is also an Injured.</p> <p>Note: Though less common, a Claimant may be an organization.</p>	<ul style="list-style-type: none"> • Must have originated as 1 Injured • Must have filed 1 or more Claims
COI (Certificate of Insurance)	<p>This document identifies when a third party provides coverage for a Member.</p> <p>Note: There is disagreement as to whether or not it is feasible or desirable to consistently collect this information from members.</p>	<ul style="list-style-type: none"> • Must cover 1 Member
Communication	<p>Notes created by CJPIA staff to document the content of a Member interaction.</p>	<ul style="list-style-type: none"> • Must document interactions with 1 Member
Contract	<p>Agreement between Member and a third party where the Member extends coverage to the third party.</p> <p>Note: Note: There is disagreement as to whether or not it is necessary or desirable to keep this information.</p>	<ul style="list-style-type: none"> • Must be covered by 1 or more EOC
Coverage Program	<p>Program that defines what Claims are covered, how coverage is paid, and how costs are allocated.</p> <p>Note: All CJPIA members must participate in the general liability coverage program.</p>	<ul style="list-style-type: none"> • May be associated with 0 or more Underwriting Details • May cover 0 or more Members • May be supported by 0 or more RM Tool • May cover 0 or more EOC • May cover 0 or more Claims • May be assisted by 0 or 1 TPA
EOC	<p>Evidence of coverage that shows a member is extending its coverage to another entity.</p> <p>Note: An EOC must base coverage on a member contract with a third party, but CJPIA may not keep it.</p>	<ul style="list-style-type: none"> • May be based on 0 or 1 stored Contract • Must provide coverage from 1 Coverage Program • Must extend the coverage of 1 Member

Table 1 - Entity Summary Table

Entity	Description / Notes	Relationships
Event	<p>Training class, conference, academy, or other organized group activity managed by CJPIA.</p> <p>Note: Workshops are one-day single-location events. Academies last multiple days, may have costs and restrictions, and may require collection of additional registration data. Conferences are multi-day, multi-location events with costs and optional components.</p>	<ul style="list-style-type: none"> • May have 0 or more Registrants • May generate 0 or more Invoices • May have 0 or more Materials • Must be based on 1 or more Subject Matter • Must be presented on 1 Event Schedule • May have 0 or more Sponsorships • Must be held at 1 or more Locations • May have 0 or more Event Notes • May generate 0 or more Bills • May employ 0 or more Instructors
Event Note	<p>Information about an Event. Can be sent to participants, hosts, instructors, or potential participants.</p>	<ul style="list-style-type: none"> • Must refer to 1 or more Events
Event Schedule	<p>Calendar of Events that identifies Events, Locations, and times.</p> <p>Note: This may be a 'virtual' entity created dynamically when viewed.</p>	<ul style="list-style-type: none"> • May document 0 or more Events
Incident	<p>Any event that occurs which may result in a claim against a Member.</p> <p>Note: The ERM suggests that a Claim cannot exist without a prior Incident.</p>	<ul style="list-style-type: none"> • Must involve 1 or more Members • May have 0 or more Witnesses • May harm 0 or more Injured • May result in 0 or more Claims
Injured	<p>Person who was damaged (either physically or finically) by an event documented as an Incident.</p> <p>Note: Though less common, an Injured may be an organization.</p>	<ul style="list-style-type: none"> • Must be involved in 1 or more Incidents • May become 1 Claimant
Instructor	<p>Typically a trainer, but can be any paid event leader.</p> <p>Note: An Instructor is usually a person, but may also be an organization.</p>	<ul style="list-style-type: none"> • Instructs 0 or more Events • Submits 0 or more Bills
Invoice	<p>Request for payment for Registrant to participate in Event.</p> <p>Note: "Invoice" refers to a CJPIA request for payment from another entity. "Bill" refers to a request for CJPIA to pay another entity.</p> <p>Note: EDB will provide Great Plains with data to generate invoices, but will not maintain an actual invoice.</p>	<ul style="list-style-type: none"> • Must be for 1 or more Registrants • Must be for 1 or more Events

Table 1 - Entity Summary Table

Entity	Description / Notes	Relationships
Key Position	This entity creates a relationship between a Member and the Member Employee that fulfills one of several critical positions tracked for all Members (e.g., City Manager).	<ul style="list-style-type: none"> • Must be tied to 1 Member • Must be tied to 1 Member Employee
Location	Place where Events take place.	<ul style="list-style-type: none"> • May be used for 0 or more Events • May belong to 0 or 1 Member
Loss History	Summary of updates and changes to a claim for a given month. Note: The transaction details that result in changes to the monthly loss history are not available to CJPIA except through manual interaction with TPA claim tracking systems.	<ul style="list-style-type: none"> • Must document activities for 1 Claim
LossCAP	The Loss Cap Action Plan that is created to address RME findings.	<ul style="list-style-type: none"> • Must be related to 1 RME
Materials	Information for participants to use before, during, or after an Event.	<ul style="list-style-type: none"> • Must be for 1 or more Events
Member	Organization which pools risk through participating in CJPIA Coverage Programs. Note: Inactive Members do not participate in current Coverage Programs.	<ul style="list-style-type: none"> • May employ 0 or more Member Employee • May have 0 or more Locations • May report 0 or more Incidents • Must participate in 1 or more Coverage Programs • Must submit 1 or more Underwriting Details • May establish 0 or more EOC • May receive 0 or more RME • May be assigned 0 or more CJPIA Staff • May record 0 or more Communications • May establish 0 or more COI • May assign 1 or more Key Positions
Member Employee	Employee of a Member. Note: This is a person who may have other roles in the database (e.g., registrant). This person may a contractor covered by a "protected contract."	<ul style="list-style-type: none"> • Must be employed by 1 or more Member • May hold 0 or more Key Positions within a member organization • May be responsible for 0 or more video Rental
Registrant	Person who signs up to participate in an Event. Note: This person is most often also a Member Employee.	<ul style="list-style-type: none"> • Must be registered for 1 or more Events • May be charged with 0 or more Invoices

Table 1 - Entity Summary Table

Entity	Description / Notes	Relationships
Rental	Occurrence of a Member Employee borrowing a video for viewing. Note: In the case of video viewed via the Internet, this record indicates that the video was streamed electronically.	<ul style="list-style-type: none"> • Must be for 1 or more Video • Must be assigned to 1 or more Member Employee
RM Tool	Information for CJPIA Members designed to help them improve risk management efforts (e.g., white papers, policies, checklists, resolutions, newsletters).	<ul style="list-style-type: none"> • May apply to 0 or more Coverage Programs
RME	Risk management evaluation data.	<ul style="list-style-type: none"> • Must be tied to 1 Member • May have 0 or 1 related LossCAP
Sponsor	A financial or other supporter of an Event. Note: a Sponsor may be a person or an organization.	<ul style="list-style-type: none"> • May participate in 0 or more Sponsorships
Sponsorship	A particular arrangement with a Sponsor for an Event.	<ul style="list-style-type: none"> • Must refer to 1 Event • Must involve 1 Sponsor
Subject Matter	The content to be taught or discussed at an Event.	<ul style="list-style-type: none"> • May be discussed in 0 or more Events
TPA	Third party administrator of claims against CJPIA Members.	<ul style="list-style-type: none"> • Must process 1 or more type of Claim • May assign 0 or more TPA Staff to Claims
TPA Staff	TPA employee who is assigned to individual claims. Note: This is a person who may have other roles in the database (e.g., Registrant).	<ul style="list-style-type: none"> • Must works for 1 TPA • May be assigned to 0 or more Claims
Underwriting Details	Member information used to determine primary deposit and provide exposure information. Note: In order to properly calculate primary and retrospective deposits, separate Underwriting Details are needed for each coverage period.	<ul style="list-style-type: none"> • Must describe 1 Member • Must be tied to 1 or more Coverage Programs
Video	Instructional video available for Members to borrow and view. Note: This can represent both physical videos and video to be viewed via the Internet.	<ul style="list-style-type: none"> • May be checked out for 0 or more Rentals
Witness	A person who has first-hand information regarding an Incident.	<ul style="list-style-type: none"> • Must observe 1 or more Incidents

4. Entity Detail Table

In the following table, the Unique Identifier column lists the data within an entity that is used to distinguish each instance of an entity from all others. The Significant Data column lists the specific elements or groupings of data (e.g., “contact information”) that are important to the purpose of the entity. While Unique Identifier data is significant, it is not repeated in the Significant Data column. Not all data that is likely to be captured about each entity is listed in this table. The table is listed in alphabetical order to facilitate references while reviewing the ERM.

Please note that the data names used in this table are descriptive only and for the purposes of this document only. Also, this table describes the data in concept, not in a physical layout (i.e., some data in the table will need to be arranged into currently undefined entities in order to implement the EDB – such as an entity that connects CJPIA Staff with Members, allowing each CJPIA staff to be assigned to multiple Members). The notation “system-assigned” indicates that the system assigns an arbitrary value at the time the entity is created.

Table 2 is not a comprehensive list of entities or all the data they will contain. Only the most significant data are described here.

Table 2 – Entity Detail Table

Entity	Unique Identifier	Significant Data
Bill	Bill-ID: combination of: <ul style="list-style-type: none"> • Instructor-ID • Event-ID • Bill-Date 	<ul style="list-style-type: none"> • Bill-Item • Bill-Item-Price • Bill-Terms
CJPIA	CJPIA-ID (system-assigned)	<ul style="list-style-type: none"> • Name • Contact-Information
CJPIA Staff	CJPIA-Staff-ID (system-assigned) Note: CJPIA Staff may be connected to various entities besides a member (e.g., Communication, Event)	<ul style="list-style-type: none"> • Name • Contact-Information • Position • Member-Assignments
Claim	Claim-ID	<ul style="list-style-type: none"> • Incident-ID • Claimant-ID • Coverage-Code • Description-of-Loss • Severity-Code • Date-of-Loss • Date-of-Report • Litigation • Initial-Loss-Reserve • Location-Detail • TPA-Staff-ID

Table 2 – Entity Detail Table

Entity	Unique Identifier	Significant Data
Claimant	Claimant-ID (system-assigned)	<ul style="list-style-type: none"> • Name • Contact-Information
COI (Certificate of Insurance)	COI-ID: combination of: <ul style="list-style-type: none"> • Member-ID • Sequence-Number (system-assigned) 	<ul style="list-style-type: none"> • (document content) • Effective-Dates • Third-Party-ID • Terms
Communi- cation	Communication-ID: combination of: <ul style="list-style-type: none"> • Member-ID • Sequence-Number (system-assigned) 	<ul style="list-style-type: none"> • (document content) • CJPIA-Staff • Date-Time • Type • Key-Word
Contract	Contract-ID: combination of: <ul style="list-style-type: none"> • Member-ID • Sequence-Number (system-assigned) 	<ul style="list-style-type: none"> • (document content) • Effective-Dates • Third-Party-ID • Terms
Coverage Program	Program-ID	<ul style="list-style-type: none"> • Effective-Dates • Coverage-Terms • TPA • Underwriting-Data-Required • RM Tool
EOC	EOC-ID: combination of: <ul style="list-style-type: none"> • Member-ID • Sequence-Number (system-assigned) 	<ul style="list-style-type: none"> • Contract-ID • Effective-Dates • Program-ID • Terms • Recurring-Indicator • Recurring-Dates
Event	Event-ID (system-assigned)	<ul style="list-style-type: none"> • Subject-Matter-ID • Date-Time • Location-ID • Instructor-ID • CJPIA-Staff-ID • Restrictions • Fees
Event Note	Event-note-ID: combination of: <ul style="list-style-type: none"> • Event-ID • Sequence-Number (system-assigned) 	

Table 2 – Entity Detail Table

Entity	Unique Identifier	Significant Data
Event Schedule	Calendar-ID: combination of: <ul style="list-style-type: none"> • Begin-Date • End-Date <p>Note: This may be a 'virtual' entity created dynamically when viewed.</p>	
Incident	Incident-ID: combination of: <ul style="list-style-type: none"> • Member-ID • Sequence-Number (system-assigned) 	<ul style="list-style-type: none"> • Incident-Date • Incident-Description • Other-Member-ID
Injured	Injured-ID (system-assigned)	<ul style="list-style-type: none"> • Name • Contact-Information • Incident-ID
Instructor	Instructor-ID (system-assigned)	<ul style="list-style-type: none"> • Name • Contact-Information • Subject-Matter-ID
Invoice	Invoice-ID combination of: <ul style="list-style-type: none"> • Event-ID • Registrant-ID 	<ul style="list-style-type: none"> • Event-ID • Registrant-ID • Invoice-Date • Invoice-Item • Invoice-Item-Price • Invoice-Terms
Key Position	Key-Position-ID: combination of: <ul style="list-style-type: none"> • Member-ID • Member-Employee-ID 	
Location	<ul style="list-style-type: none"> • Location-ID (system-assigned) 	<ul style="list-style-type: none"> • Geographic-Location • Region • Address • Contact-Information • Capacity • Restrictions • Equipment • Availability • Special-Information
Loss History	Loss-History-ID: combination of: <ul style="list-style-type: none"> • Claim-ID • Loss-History-Date 	<ul style="list-style-type: none"> • Status • Current-Loss-Reserve • Loss-Paid-to-Date • Loss-Recovered-to-Date • Expense-Paid-to-Date • Expense-Recovered-to-Date

Table 2 – Entity Detail Table

Entity	Unique Identifier	Significant Data
LossCAP	LossCAP-ID: combination of: <ul style="list-style-type: none"> Member-ID RME-ID 	<ul style="list-style-type: none"> (document content) LossCAP-Improvement-Goal LossCAP-Improvement-Progress LossCAP-Notes
Materials	Materials-ID: combination of: <ul style="list-style-type: none"> Event-ID Sequence-Number (system-assigned) 	<ul style="list-style-type: none"> (Content) Instructor-ID
Member	Member-ID (system-assigned)	<ul style="list-style-type: none"> Name Contact-Information Region Program-ID Key-Positions
Member Employee	Member-Employee-ID (system-assigned)	<ul style="list-style-type: none"> Name Contact-Information Position
Registrant	Registrant-ID (system-assigned)	<ul style="list-style-type: none"> Name Contact-Information
Rental	Rental-ID: combination of: <ul style="list-style-type: none"> Member-Employee-ID Video-ID Sequence-Number (system-assigned) 	<ul style="list-style-type: none"> Rental-Date Due-Date Shipped-Date Returned-Date Viewed-Date
RM Tool	Tool-ID: combination of: <ul style="list-style-type: none"> Program-ID Sequence-Number (system-assigned) <p>Note: RM Tool will most likely be developed as several distinct sub-entities, each having a differently structured unique identifier</p>	<ul style="list-style-type: none"> Tool-Content Tool-Date
RME	RME-ID: combination of: <ul style="list-style-type: none"> Member-ID Sequence-Number (system-assigned) 	<ul style="list-style-type: none"> RME-Date RME-Item RME-Item-Type RME-Item-Status RME-Notes Tool-ID
Sponsor	Sponsor-ID (system-assigned)	<ul style="list-style-type: none"> Name Contact-Information Sponsor-Type
Sponsorship	Sponsorship-ID: combination of: <ul style="list-style-type: none"> Sponsor-ID Event-ID 	

Table 2 – Entity Detail Table

Entity	Unique Identifier	Significant Data
Subject Matter	Subject-Matter-ID	<ul style="list-style-type: none"> • Title • Description • Type • Length • Regulation • Frequency • Who-Should-Attend
TPA	TPA-ID (system-assigned)	<ul style="list-style-type: none"> • Name • Contact-Information • Program-ID
TPA Staff	TPA-Staff-ID (system-assigned)	<ul style="list-style-type: none"> • Name • Contact-Information • TPA-ID
Underwriting Details	Underwriting-Details-ID: combination of: <ul style="list-style-type: none"> • Member-ID • Coverage-Period 	<ul style="list-style-type: none"> • Demographic-Data • Financial-Data • Payroll-Data • Protected-Contract-Data • Exposure-Data
Video	Video-ID (system-assigned)	<ul style="list-style-type: none"> • Video-Type • Rental-Period
Witness	Witness-ID (system-assigned)	<ul style="list-style-type: none"> • Name • Contact-Information • Incident-ID • Witness-Statement

5. Data Origination Table

This table defines where the significant data that makes up each entity originates, and whether or not the entity is expected to be stored in the EDB for user access. Where EDB keeps a copy of data from another source, data would not be modified by EDB, only copied from the source.

Table 3 – Data Origination Table

Entity	Origin	Where Stored
Bill	Paper sent by Instructor	Accounting
CJPIA	Created as part of EDB	EDB
CJPIA Staff	Entered by CJPIA staff	EDB
Claim	Provided by TPA	EDB (copy of TPA data)
Claimant	Provided by TPA	EDB (copy of TPA data)
COI (Cert of Insurance)	Entered by CJPIA staff or Member	EDB (copy of Member contract)
Communi-cation	Entered by CJPIA staff	EDB
Contract	Entered by CJPIA staff or Member	EDB (copy of Member contract)
Coverage Program	Entered by CJPIA staff	EDB
EOC	Entered by CJPIA staff	EDB
Event	Entered by CJPIA staff	EDB
Event Note	Entered by CJPIA staff	EDB
Event Schedule	Created by EDB	EDB (possibly created dynamically)
Incident	Entered by Member	EDB
Injured	Entered by Member	EDB
Instructor	Entered by CJPIA staff	EDB
Invoice	Created by EDB	Accounting
Key Position	Entered by CJPIA staff	EDB
Location	Entered by CJPIA staff or Member	EDB
Loss History	Provided by TPA	EDB (copy of TPA data)
LossCAP	Entered by CJPIA staff	EDB
Materials	Entered by Instructor or CJPIA staff	EDB
Member	Entered by CJPIA staff	EDB
Member Employee	Entered by CJPIA staff or Member	EDB
Registrant	Entered by Member	EDB
Rental	Entered by Member and CJPIA staff	EDB
RM Tool	Entered by CJPIA staff	EDB
RME	Provided by POMS	EDB (copy of POMS data)
Sponsor	Entered by CJPIA staff	EDB
Sponsorship	Entered by CJPIA staff	EDB
Subject Matter	Entered by CJPIA staff	EDB
TPA	Provided by TPA	EDB
TPA Staff	Provided by TPA	EDB
Underwriting Details	Entered by Member	EDB
Video	Entered by CJPIA staff	EDB
Witness	Entered by Member	EDB