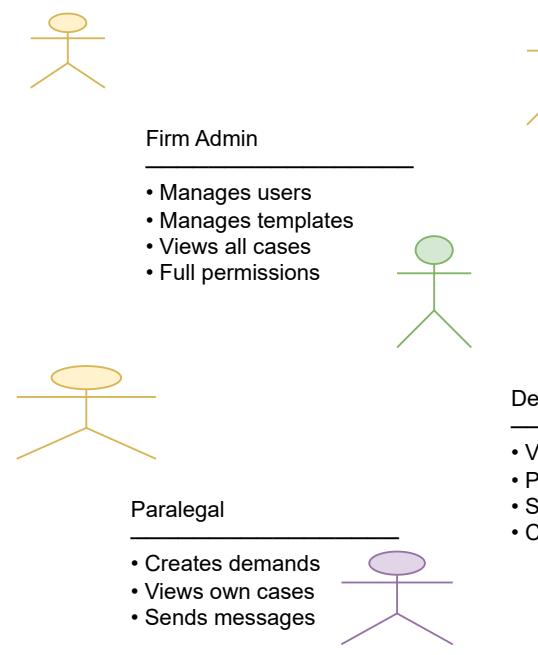# Steno Demand Letter Platform - Object Relationship Diagram

ACTORS

Firm Admin
- Manages users
- Manages templates
- Views all cases
- Full permissions

Attorney
- Creates demand letters
- Approves payment plans
- Manages templates
- Views all cases

Debtor
- Views own case
- Proposes plans
- Sends messages
- Completes assessment

Paralegal
- Creates demands
- Views own cases
- Sends messages

Public Defender
- Views assigned debtors
- Reviews AI recommendations
- Adds case notes

LEGEND

- ☐ Organization (Tenant Boundary)
- ☐ Creditor Side (Firm Admin, Attorney, Paralegal)
- ☐ Debtor Side (Profile, Plans, Agreements)
- ☐ Communication (AI-mediated messages)
- ☐ Intelligence (Embeddings, Public Defender)
- ☐ Compliance (Audit Logs - FDCPA)
- ☐ Core Artifacts (Templates, Demand Letters)
- ◆——▶ Composition (strong ownership)

Organization
- + id: UUID (PK)
- + name: string
- + settings: JSONB
- + created_at: timestamp

Tenant isolation boundary

Template
- + id: UUID (PK)
- + organization_id: UUID (FK)
- + name: string
- + content: text
- + variables: JSONB
- + is_default: boolean

Firm-specific letter templates

DebtorProfile
- + id: UUID (PK)
- + user_id: UUID (FK)
- + demand_letter_id: UUID (FK)
- + monthly_income: decimal (encrypted)
- + monthly_expenses: decimal (encrypted)
- + dependents: integer
- + hardship_factors: JSONB
- + stress_level: enum
- + cooperation_level: enum
- + assessment_completed: boolean
- + invitation_token: string

PII encrypted via KMS

User
- + id: UUID (PK)
- + organization_id: UUID (FK)
- + email: string (unique)
- + password_hash: string
- + role: enum
- + email_verified: boolean
- + created_at: timestamp

Roles: Admin|Attorney|Paralegal|Debtor|PD

DemandLetter
- + id: UUID (PK)
- + organization_id: UUID (FK)
- + template_id: UUID (FK)
- + created_by: UUID (FK)
- + debtor_name: string (encrypted)
- + debt_amount: decimal (encrypted)
- + debt_origin_date: date
- + content: text
- + status: enum
- + fdcpa_validated: boolean

Status: draft|approved|sent

Agreement
- + id: UUID (PK)
- + organization_id: UUID (FK)
- + payment_plan_id: UUID (FK)
- + debtor_profile_id: UUID (FK)
- + document_url: string
- + signed_at: timestamp
- + debtor_signature: string
- + creditor_signature: string

PDF generated via PDFKit

Message
- + id: UUID (PK)
- + organization_id: UUID (FK)
- + debtor_profile_id: UUID (FK)
- + sender_id: UUID (FK)
- + recipient_id: UUID (FK)
- + content: text (encrypted)
- + original_content: text
- + tone_score: decimal
- + was_rewritten: boolean
- + created_at: timestamp

AI tone mediation applied

PaymentPlan
- + id: UUID (PK)
- + organization_id: UUID (FK)
- + debtor_profile_id: UUID (FK)
- + proposed_by: UUID (FK)
- + total_amount: decimal
- + monthly_payment: decimal
- + duration_months: integer
- + start_date: date
- + status: enum
- + ai_recommended: boolean

Status: proposed|counter|accepted|rejected

ProfileEmbedding
- + id: UUID (PK)
- + debtor_profile_id: UUID (FK)
- + embedding_vector: VECTOR(1536)
- + model_version: string
- + profile_snapshot: JSONB
- + outcome: enum
- + outcome_recorded_at: timestamp

pgvector for similarity search

AuditLog
- + id: UUID (PK)
- + organization_id: UUID (FK)
- + user_id: UUID (FK)
- + action: string
- + resource_type: string
- + resource_id: UUID
- + metadata: JSONB
- + ip_address: string

Append-only, FDCPA compliance

Session
- + id: UUID (PK)
- + user_id: UUID (FK)
- + token_hash: string
- + expires_at: timestamp
- + created_at: timestamp

JWT, HTTP-only cookies

PublicDefenderAssignment
- + id: UUID (PK)
- + public_defender_id: UUID (FK)
- + debtor_profile_id: UUID (FK)
- + assigned_at: timestamp
- + notes: text

Links PD to assigned debtors

Relationships: has templates · has users · creates · generates · is debtor 1:1 · targets 1:1 · has sessions · has messages · proposes plans · becomes · generates 1:1 · 1:N