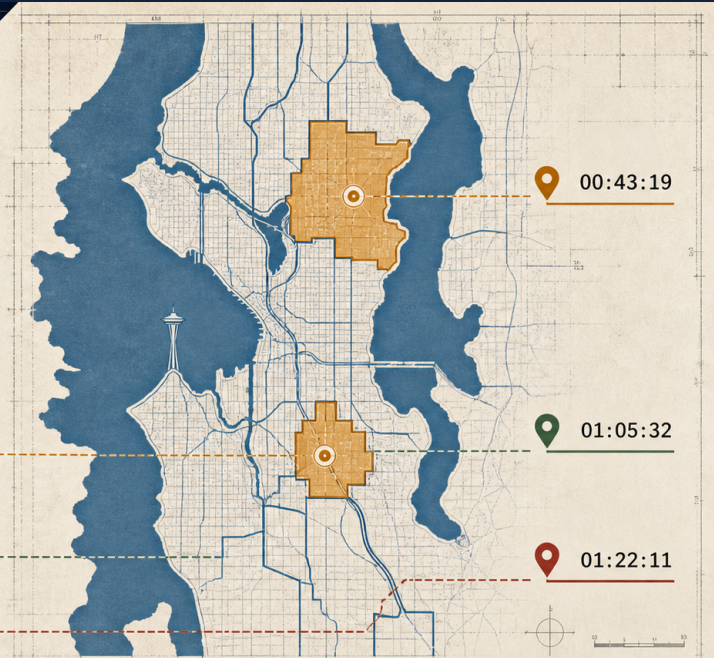


CIVICLENS

Find the decision.
See where it lands.



DECISION SYSTEMS LAB • CIVIC INTELLIGENCE

TECHNICAL RESEARCH MEMORANDUM / SYSTEM 002

CivicLens

A source-grounded civic intelligence system for mapped public decisions, procedural deadlines, and resident action briefs.

Fatima Aguilar · Decision Systems Lab · July 2026

PUBLIC RESEARCH RELEASE • SYNTHETIC CIVIC RECORD

Live: civiclens.fsaguilar16.chatgpt.site

Source: github.com/fa366193/civiclens

Abstract

Public information is not yet public understanding.

Residents regularly encounter hours of meeting footage, procedural language, agenda documents, and location references when trying to understand a decision that may affect their neighborhood. CivicLens investigates whether a bounded, multimodal decision system can convert that record into an inspectable resident brief without hiding uncertainty or automating civic participation.

CL-0.1 is a deterministic interaction prototype built around a clearly labeled synthetic Seattle committee record. It provides meeting playback, transcript timestamps, decision typing, neighborhood grounding, a seven-role investigation, an explicit challenge pass, resident context, human disposition, a complete trace, and JSON export.

The release does not perform live video analysis, identify real speakers, submit public comment, guarantee deadlines, or provide official civic guidance.

Research question

Can a bounded multimodal agent system transform public-meeting footage into faster, more accurate, geographically grounded civic action while preserving source traceability, uncertainty, and resident authority?

Layer	Function	CL-0.1 status
Public record	Meeting playback and timestamped transcript	Synthetic demo
Claim extraction	Decision, commitment, and deadline typing	Deterministic
Geographic grounding	Neighborhood relevance hypotheses	Synthetic map
Resident action	Review, verify, export	Human controlled
Live civic ingestion	Video, agenda, and official-source retrieval	Not implemented

Problem and design premise

The information exists. The decision is still hard to find.

The core problem is not meeting summarization. Residents must determine what was actually decided, distinguish it from discussion, locate the source moment, understand whether their area is implicated, identify any participation window, and decide what to verify next.

A conventional transcript search can find words but cannot reliably resolve the decision type, geographic consequence, procedural status, or uncertainty. An unconstrained language model may produce fluent summaries while collapsing distinctions the resident needs.

Design premise

CivicLens treats every resident-facing statement as a typed claim with a source timestamp, geographic hypothesis, procedural status, confidence, uncertainty note, and human disposition.



Calculation and record typing remain deterministic. Interpretation is bounded. Authority remains human.

The interface is designed around contestability. Selecting a claim jumps back to the source moment; the Civic Challenger must record what the claim does not establish; and no action is submitted by the system.

Agent architecture

Seven bounded roles around one public record

Role	Bounded responsibility
Record Clerk	Segments speakers, agenda items, motions, votes, and temporal boundaries.
Decision Extractor	Separates adopted decisions from proposals, discussion, and commitments.
Geographic Grounder	Resolves named streets, districts, facilities, and neighborhood hypotheses.
Impact Analyst	Translates the record into possible resident-level effects without asserting eligibility.
Process Sentinel	Finds deadlines, hearings, responsible agencies, and missing procedural information.
Civic Challenger	Tests overstatement, missing context, source weakness, and uncertainty.
Brief Synthesizer	Creates the source-linked resident packet after challenge has been recorded.

Why bounded roles

The roles create attribution. A geographic error can be traced to grounding; a procedural error to the sentinel; an unsupported interpretation to the impact layer. The system is not presented as seven independent minds. It is a protocol with seven inspectable responsibilities.

Mandatory dissent

The Civic Challenger is structurally required before synthesis. Agreement is therefore an output to be earned rather than the default behavior of cooperating components.

Data and claim model

Decision is not a synonym for discussion.

Claim type	Required evidence	Resident interpretation
Decision	Motion or directive plus recorded disposition	An action the body adopted
Commitment	Attributed promise with timestamp	Expected follow-up, not necessarily binding
Deadline	Date, time, channel, and source	A participation window to verify
Proposal	Named proposal without adoption evidence	Still under consideration
Discussion	Context without formal disposition	Informative, not an action

Minimal claim record

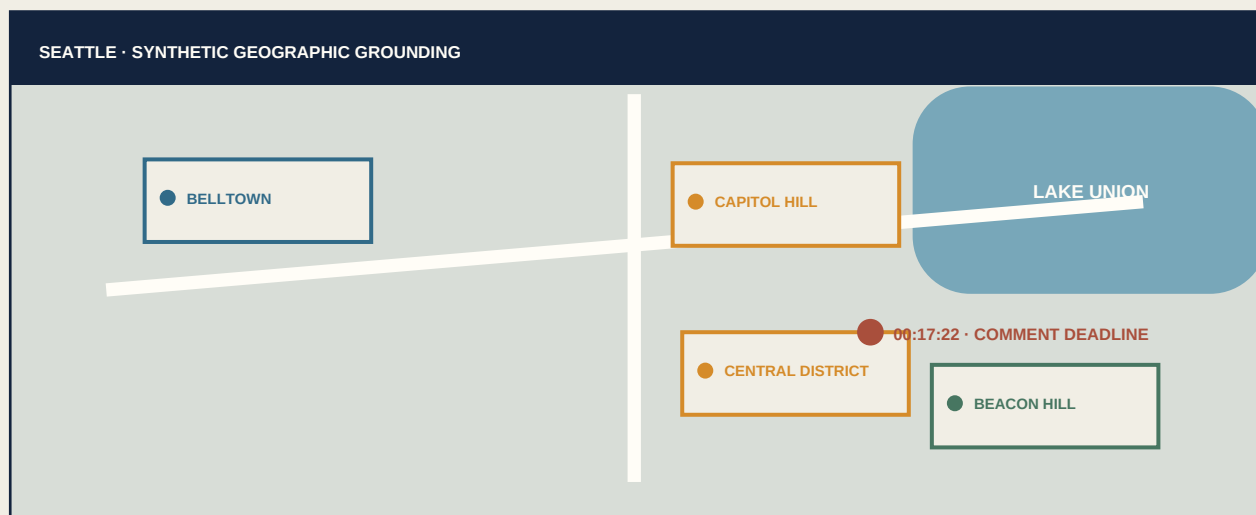
claim_id, record_type, claim_text, source_timestamp, speaker_or_body, agenda_item, geographic_entities, affected_area_hypothesis, procedural_status, confidence, uncertainty, official_source_pointer, challenge_note, resident_disposition.

Abstention

A production system must be able to emit 'insufficient evidence' when the record lacks an adopted motion, a resolvable location, or a complete deadline. Coverage should never be maximized by converting uncertainty into invented certainty.

Geographic grounding

A civic claim becomes useful where it lands.



The current release uses a stylized synthetic map and four selectable neighborhoods. Selecting a resident context filters the brief to claims whose demo record includes that neighborhood.

Production grounding would require a governed chain from meeting language to official geographic identifiers such as streets, parcels, council districts, service areas, or project boundaries. Each resolution should retain the original phrase, candidate locations, chosen identifier, confidence, and evidence.

The map must never imply that a resident is legally eligible, officially affected, or required to act. Geographic relevance is an inspectable hypothesis until verified against an authoritative source.

Resident context

Address entry in CL-0.1 is session-only and is not transmitted. It changes the displayed synthetic context but does not perform geocoding. A production release should minimize address collection and prefer coarse neighborhood context when precision is unnecessary.

Interaction protocol

From meeting record to resident disposition

Stage	Visible operation
01 - Ingest	Register the record and preserve the source boundary.
02 - Segment	Identify agenda sections, speakers, and temporal units.
03 - Extract	Type decisions, commitments, proposals, and deadlines.
04 - Ground	Resolve geographic references and resident-context hypotheses.
05 - Challenge	Expose overstatement, missing evidence, and uncertainty.
06 - Brief	Assemble source links, next steps, and human disposition.

The public demo compresses this protocol into a visible 13.5-second review. Users can jump from decision cards to source timestamps, inspect the full trace, mark a claim Relevant, Needs verification, or Not relevant, and export a JSON brief.

Upload boundary

Users may select a local video file, but CL-0.1 does not analyze it. The interface states that analysis remains attached to the labeled demo record. This avoids creating a false impression of live multimodal capability while preserving the intended interaction path for later research.

Evaluation protocol

CivicLens must be able to fail the experiment.

A controlled evaluation should compare CivicLens with raw meeting video plus agenda documents, a transcript-search baseline, and an unchallenged summarization baseline. Test cases should be annotated by multiple civic-record reviewers before interface tuning.

Metric	Operational definition
Decision precision	Extracted formal actions that are supported by the record
Decision recall	Adjudicated formal actions found by the system
Record-type accuracy	Correct separation of decision, commitment, deadline, proposal, discussion
Timestamp coverage	Resident-facing claims with a navigable source moment
Geographic accuracy	Groundings matching adjudicated official geography
Deadline accuracy	Correct date, time, channel, and procedural status
Unsupported-claim rate	Claims not entailed by the source record
Appropriate abstention	Insufficient records declined rather than guessed
Resident comprehension	Ability to explain what happened and what remains uncertain
Time to action brief	Time to a correctly interpreted, source-verified next step

Planned ablations

No Civic Challenger: tests mandatory dissent. **No geographic grounding:** tests whether localization improves relevance. **No timestamps:** tests traceability and trust. **No claim typing:** tests whether summaries collapse procedural distinctions.

Governance and limitations

The system stops before civic authority begins.

Synthetic release

The meeting, speakers, transcript, map, decisions, and deadlines in CL-0.1 are fictional.

No official guidance

Residents must verify claims, locations, deadlines, and participation channels with official sources.

No automated participation

CivicLens does not submit comments, contact officials, register users, or take political action.

Speaker attribution

Production identity resolution can be harmful when confidence is low; roles and statements require explicit provenance.

Privacy

Public footage may still contain sensitive testimony. Local processing, minimization, retention controls, and redaction are required.

Political neutrality

The system should expose decisions and participation paths without optimizing toward a party, candidate, or policy outcome.

Geographic harm

Incorrectly mapping a decision can exclude or alarm residents. All location claims require confidence and source evidence.

Accessibility

Briefs, maps, transcripts, and video controls require keyboard, screen-reader, caption, contrast, and language-access testing.

Public-record drift

Agendas, minutes, recordings, deadlines, and project boundaries can change. Production claims require freshness tracking.

Research boundary

The objective is not an automated city clerk or political agent. It is a civic investigation system that makes the public record easier to inspect, localize, challenge, and act on responsibly.

Roadmap and conclusion

From synthetic record to governed civic instrument

Version	Research milestone
CL-0.1	Synthetic interaction protocol, bounded roles, map, trace, and export
CL-0.2	Offline transcript ingestion with deterministic claim typing
CL-0.3	Official-source geographic resolver with provenance and abstention
CL-0.4	Deadline validation against agenda, minutes, and agency pages
CL-0.5	Controlled study against video, search, and summary baselines

CivicLens contributes a resident-centered decision protocol: typed claims instead of undifferentiated summaries, timestamps instead of unsupported prose, geographic hypotheses instead of generic relevance, mandatory challenge instead of silent consensus, and human disposition instead of automated participation.

Public artifacts

Live application

<https://civiclens.fsaguilar16.chatgpt.site>

Public source

<https://github.com/fa366193/civiclens>

Decision Systems Lab notebook

<https://decisionsystemslab.org/systems/civiclens>



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