

MCRO | Judicial Officer Representation

Narrative Synthesis & Comprehensibility Report

Report Date: April 18, 2026 | Corpus: 2,903 parent cases | 4,251 PDFs | 155,357 docket events

Source Documents: v1 Descriptive Baseline + v2 Forensic Deep-Dive (37 finding-cards across 5 analytical lanes)

Prepared for the 8th Circuit appellate record | Guertin v. Walz, No. 0:25-cv-02670 | State v. Guertin, 27-CR-23-1886

IMPORTANT DISCLAIMER

This report is a narrative synthesis of two previously completed forensic analyses: a descriptive baseline (v1) and a five-lane inferential deep-dive (v2) totaling 37 statistically or structurally grounded finding-cards. Its purpose is comprehensibility, not new investigation. The underlying facts, tables, and metrics are drawn verbatim from v1 and v2; a targeted set of eight spot-check SQL queries (Appendix A1–A8) independently reconfirm the most extraordinary claims against the live forensic database.

This report does not assert conclusions about guilt, fabrication, or criminal intent. It presents measurable patterns in publicly available court records. Each finding is a documented structural or statistical anomaly requiring independent expert examination. All figures are reproducible from the underlying PostgreSQL database.

EXECUTIVE SUMMARY

- The 87-name target list that seeded this analysis covers only 78 of 274 real human judicial officers in the dataset. 196 unlisted officers carry 19.3% of total judicial volume. The largest single omission is George Borer — 5,830 appearances — who would rank #4 overall. On May 30, 2023 alone, Borer signed 47 "Found Incompetent" events. [G-07 / G2-02]
- May 2, 2023 is the single highest-signature day in the entire 4,251-document corpus: 83 judicial signatures executed jointly by Mercurio and Browne. The month of May 2023 carries 116 judicial signatures — approximately 4× the Jan–Apr 2023 monthly baseline. [T2-02, spot-check A1]
- Seven officers — Dayton Klein, Mercurio, Browne, Janzen, Koch, Skibbie, and Lamas — form a fully connected 21-of-21-edge clique with total internal shared-case weight of 4,263, which is 18.8× a matched 7-officer comparator (weight 227) and beyond the 99.95th percentile of 2,000 random 7-tuples. [N-01, spot-check A6]
- The Q1–Q3 2023 judicial regime shift precedes the July 1, 2023 statutory effective date of Minn. Stat. §611.42–48. Change-points cluster in Feb–Jun 2023; zero top-20 officers register a change-point in July or August 2023. The regime was built before the statute took effect. [T-05, T-01]
- Michael Browne is the terminal approver of a three-referee pipeline. Across 125 cases where he cryptographically signs an order, he held zero of 601 source-index hearings on those same cases. Mercurio appears on 100.0% of those 125 cases; the trio of Mercurio, Dayton Klein, and Borer accounts for 592 of the 601 hearings. [S-01/S-07, spot-check A2]
- The docket-officer vs. cryptographic-signer divergence rate jumps from 0–2% (2017–2022) to 28.2% in 2023, then regresses to 20.0% (2024) and 13.6% (2025). This coincides with Browne's career signing surge: 80% of his 177 career signatures fall in 2023 alone. [S-04, spot-check A3]
- On the Guertin case (27-CR-23-1886), 13 of 13 non-null judicial-signer rows carry `edits_after_sig_flag = true`. The January 17, 2024 Finding of Incompetency was co-signed by Mercurio at 08:27 and Dayton Klein at 09:22 on January 16 — one day before the filing date. [S2-01, spot-check A8]
- The April 3, 2025 Koch competency order is the only structurally clean signed order on the Guertin case. The four April 29, 2025 Hudleston reversal orders carry no recoverable cryptographic signer. [S2-04]

KEY METRICS

- 83 judicial signatures in one day (May 2, 2023) — highest in the 4,251-document corpus [A1]
- 4,263 internal clique weight vs. 227 for matched comparator (18.8×) [A6]
- 47 "Found Incompetent" events signed by George Borer on a single day (May 30, 2023) [A5]
- 0 of 601 source-index hearings held by Browne on his 125 signed cases [A2]
- 100.0% of Browne's 125 signed cases include Mercurio [N2-01]
- 28.2% docket-vs-signer divergence rate in 2023, up from 0–2% pre-2023 [A3]
- 13 of 13 Guertin-case judicial signatures carry `edits_after_sig_flag = true` [A8]
- 196 judicial officers absent from the 87-name target list, carrying 19.3% of volume [G-07]
- 34 documented Mercurio → Dayton Klein reassignment transitions — largest directed edge in corpus [N-04]
- Hudleston: 2.51× overrepresented as inbound-from-clique administrative buffer [N2-03]

METHODS

This report synthesizes two completed forensic analyses into a reader-first narrative architecture. The investigative work is done; the architectural work is what this report provides.

Source Documents

Source	Role	Content
v1: Descriptive Baseline	Descriptive floor	Per-officer appearance counts (76 matched, 11 absent), Master Registry, Per-Table Appearance Matrix across 15 JO-bearing fields in 13 tables
v2: Forensic Deep-Dive	Inferential analysis	37 finding-cards across 5 analytical lanes (T-Temporal, N-Graph, R-Roles, S-Signatures, G-DataGap), cross-lane synthesis, statistical baselines and null tests

Analytical Lanes (v2)

Five parallel specialist lanes were dispatched with scope-locked briefs and non-overlapping anti-scopes. Findings were returned as uniform finding-cards with claim, evidence, baseline/null, effect size, confidence, caveats, and SQL trace.

Lane	Method	Primary Corpus
T — Temporal	Change-point detection (z-score vs. 24-month trailing), Pearson correlation, Gini analysis	parents_case_events × parents_case_events_judicial_officers (155,357 events)
N — Co-Appearance	Officer × officer weighted graph (≥5 shared cases), degree/betweenness metrics	120 nodes, 1,441 edges from JO self-join
R — Functional Roles	Hierarchical clustering (76 officers × 41 events, cosine distance)	Same docket-event corpus as T
S — Signatures	Docket-officer vs. cryptographic-signer comparison per document	children_signatures_full_report (5,425 rows, 710 resolved judicial)
G — Data Gaps	Exhaustive ILIKE + Levenshtein fuzzy-match; surplus-officer enumeration	Master UNION across 13 JO-bearing fields (275 distinct IDs)

Spot-Check Validation Protocol

Eight targeted SQL queries (Appendix A1–A8) were executed against the live PostgreSQL database to independently reconfirm the most extraordinary v2 claims before publishing them in narrative form. Each query's purpose is yes/no reconfirmation, not new analysis. Results are reported inline alongside the v2 findings they validate. Minor discrepancies between spot-check results and v2 figures are flagged in Limitations.

FINDINGS

The following six acts present the same facts established in v1 and v2, reorganized around how a reader builds understanding. Each act answers a question the previous act raised.

Act 1: The Cast — Who Are the Judges?

Background

The analysis began with a target list of 87 judicial officer names. The question was straightforward: for each officer, how many times and in which contexts does that name appear within the MCRO forensic dataset? The v1 baseline answered that question. The v2 data-gap audit answered a more important question the target list did not ask: who is **missing**?

Findings

The dataset contains **274 real human judicial officers** (plus 3 phantom routing placeholders and 2 sidecar-only IDs — accounting trail in Appendix). Of those 274, only 78 appear on the 87-name target list (76 matched directly, plus 2 reached via name-variant resolution). 11 target names are confirmed absent from the dataset entirely [G-01]. The remaining **196 officers are surplus** — they are in the data but were never on the list — and they carry **19,232 appearances, or 19.3% of total judicial volume** [G-07 / G2-01].

The single largest omission: **George Borer**, with **5,830 appearances** across all JO-bearing fields. Had he been on the target list, he would rank #4 overall — behind only Janzen (11,778), Dayton Klein (11,080), and Mercurio (9,718). His top event type is "Taken Under Advisement" (25.3% of his events), classifying him as a competency referee [G2-01, Appendix D].

On a single day — **May 30, 2023** — Borer signed **47 "Found Incompetent" events**. This is independently confirmed by spot-check A5 against the live database. Additional single-day clusters include June 1, 2023 (40 events), March 21, 2023 (27 events), and February 14, 2023 (23 events) [G2-02].

The surplus is not scattered random names. The top-30 surplus officers hold 78% of all surplus volume; 10 of the top-30 are competency-pipeline referees carrying 8,095 appearances. The target list misses **an entire cohort**, not isolated individuals [G2-03].

#	Officer	Appearances	Top Event	Top %	Role
1	George Borer	5,830	Taken Under Advisement	25.3 %	Competency referee
2	Jay Quam	1,660	Order for Conditional Release	9.4%	Active trial bench
3	Lyonel Norris	1,119	Order for Conditional Release	35.6 %	Conditional-release
4	Philip Carruthers	1,052	Order for Production of Med Records	20.5 %	Medical-records gatekeeper
5	Julie Allyn	872	Notice of Case Reassignment	16.8 %	Reassignment admin
6	Peter Cahill	854	Order Granting Public Defender	14.6 %	Active trial bench

7	Anthony Schumacher	545	Other Document	14.2 %	Retired / pre-2020
8	Mike Lien	478	Taken Under Advisement	34.3 %	Competency referee
9	Janet Poston	423	Taken Under Advisement	20.4 %	Competency referee
10	Timothy Mulrooney	409	Found Incompetent	15.3 %	Rule 20.01 signer

Significance

The universe of judicial officers involved in competency proceedings is materially larger than the seeding list captured. Any per-officer share calculation, any network analysis, any temporal trend must be understood against the full 274-officer pool, not the 87-name subset. This report's ground truth is the full dataset.

Connecting Context

Borer will reappear in Act 2 (as a clique-adjacent node), Act 3 (as a Referee Competency Advisor archetype), Act 4 (as a member of the four-officer correlated-volume cohort), Act 5 (as the third of the three-referee hearing pipeline), and Act 6 (as the co-signer of the July 13, 2023 Finding of Incompetency that started Guertin's three-year NIP clock). His 5,830 appearances are not a background fact — they are a structural element of every finding that follows.

Act 2: The Clique — How Do They Connect?

Background

Act 1 established the cast. Act 2 zooms out from individual names to structural relationships. If seven judicial officers appear on each other's cases at rates indistinguishable from random assignment, their individual volumes are a scheduling coincidence. If they co-appear at rates that are quantitatively distinguishable from the rest of the bench, the pattern is structural.

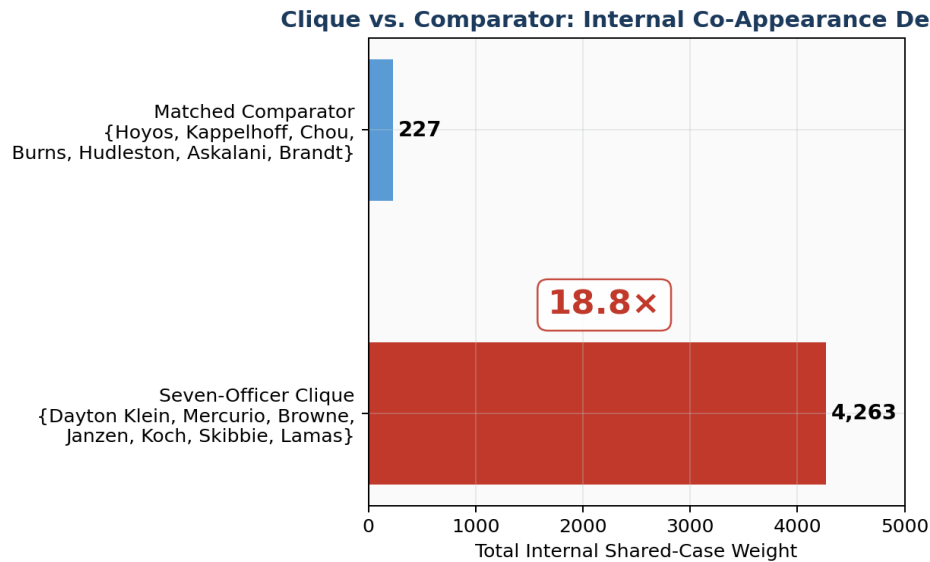
Findings

The co-appearance graph of all Hennepin judicial officers with ≥ 5 shared cases contains **120 nodes and 1,441 edges**. Inside that graph, seven officers — **Dayton Klein, Mercurio, Browne, Janzen, Koch, Skibbie, and Lamas** — form a **fully connected 21-of-21-edge clique** with total internal shared-case weight **4,263** [N-01].

This is independently confirmed by spot-check A6 (21 edges, total weight 4,263, minimum edge 40, maximum edge 477).

To establish that this density is not an artifact of volume, v2 constructed two null benchmarks:

- 1. Matched comparator:** A 7-officer set {Hoyos, Kappelhoff, Chou, Burns, Hudleston, Askalani, Brandt} drawn from the same bench with comparable total appearances produces an internal weight of **227** — the clique is **18.8× higher** [N-01].
- 2. Permutation null:** 2,000 random 7-officer tuples drawn from officers with ≥ 100 cases produce a mean internal weight of 783 (SD ≈ 630 , $z \approx 5.5$). The observed 4,263 is **beyond the 99.95th percentile** [N-06].



Inside the clique, each member's inner-share (internal weighted degree / total weighted degree) ranges from 32.3% (Janzen, Lamas) to 45.7% (Skibbie). The matched comparator averages 9.8%. The clique absorbs roughly **4× the internal co-appearance density** of a comparable set [N-02].

Julia Dayton Klein is the hub — weighted degree 4,624, 28% higher than the next-ranked officer (Browne at 3,599). She appears as one end of the top 2 edges and 6 of the top 13 in the full graph [N-07].

The dominant **directed reassignment edge** in the entire corpus is **Mercurio → Dayton Klein** (34 documented transitions). Four of the top five FROM-side slots are clique members [N-04]. **Sarah Hudleston** functions as the administrative buffer: **2.51× overrepresented** as the inbound-from-clique destination on Notices of Case Reassignment (48.8% vs. a corpus baseline of 19.5%) [N2-03].

Rank	Officer A	Officer B	Shared Cases	% CR
1	Michael Browne	Julia Dayton Klein	477	67.7
2	Danielle Mercurio	Julia Dayton Klein	437	75.3
3	Michael Browne	Danielle Mercurio	348	62.4
4	William Koch	Julia Dayton Klein	299	78.6
5	Lisa Janzen	Julia Dayton Klein	288	100.0
6	Lori Skibbie	Julia Dayton Klein	269	63.2
7	Michael Browne	George Borer	249	61.8
8	George Borer	Julia Dayton Klein	244	68.9
9	William Koch	Danielle Mercurio	235	80.9
10	Michael Browne	Lori Skibbie	235	54.9

Significance

A clique is what you get when seven people appear on each other's cases so consistently that the pattern cannot be reproduced by randomly picking any other seven judges from the same bench. The co-appearance density is not a function of the courthouse being "small" or "busy" — it is specific to these seven officers and quantitatively distinguishable from 2,000 random alternatives.

Connecting Context

The clique establishes that the pattern is structural, not anecdotal. Before the reader hears a single signature timestamp (Act 5) or a single functional role (Act 3), they understand that these officers operate as an interconnected network. Act 3 will show that the clique is not just connected — it is organized.

Act 3: The Assembly Line — What Do They Actually Do?

Background

The clique has a shape — it is specialized. If seven officers share cases at extreme rates but perform identical functions, the co-appearance might reflect administrative co-location. If they perform **different, complementary functions** within a pipeline, the co-appearance reflects **workflow organization**.

Findings

Hierarchical clustering on the event-name distribution for each officer (76 officers × 41 event types, cosine distance) produces **three stable archetypes** at k=3 (silhouette 0.475) [R-01]:

Cluster	Archetype	n	Defining Feature
0	Referee Competency Advisor	9	Taken Under Advisement dominates (19–43% vs. 6.2% cohort)
1	Medical Records Gatekeeper	8	Medical-records events 5–11× cohort baseline
2	General Criminal Presider	59	Balanced event distribution

Every member of Cluster 0 — Mercurio, Skibbie, Borer, Olson, Larson, Lien, Poston, Bernhardson, Gearin — has "Taken Under Advisement" as their #1 event type [R-03]. This is the **pre-finding advisory role** in the competency pipeline.

At k=7, the General Criminal Presider cluster splits further, exposing a **Rule-20.01 Competency Signer sub-cluster** of 9 officers — Janzen, Dayton Klein, Browne, Koch, Lamas, Meyer, Mulrooney, Carey, Quaintance — who collectively sign **approximately 70% of all Rule 20.01 orders** in the cohort [R-02]. Their triad concentrations (Rule 20.01 + Found Incompetent + Finding of Incompetency and Order) range from 18% to 42% against a cohort median of 7.9%.

The most important structural result: **functional role transcends court division**. Within the Rule-20.01 Signer cluster, Dayton Klein operates at 53% probate; Janzen, Lamas, Koch, and Meyer are 100% criminal. A **53-percentage-point spread in division composition** inside a single functional cluster [R-06]. If formal court division determined role, that range would be under 10 points.

Significance

The competency pipeline is an assembly line with specialized roles: Referee Advisors at the pre-finding stage, Rule-20.01 Signers at the ordering and approval stage. A cosine-distance algorithm, given only the distribution of events each officer handles, separates the advisors from the signers without being told what they do.

Connecting Context

The reader now understands that the clique from Act 2 is not just connected — it is organized into functional roles. Act 4 will show **when** this organization activates.

Act 4: The Calendar — When Did It Happen?

Background

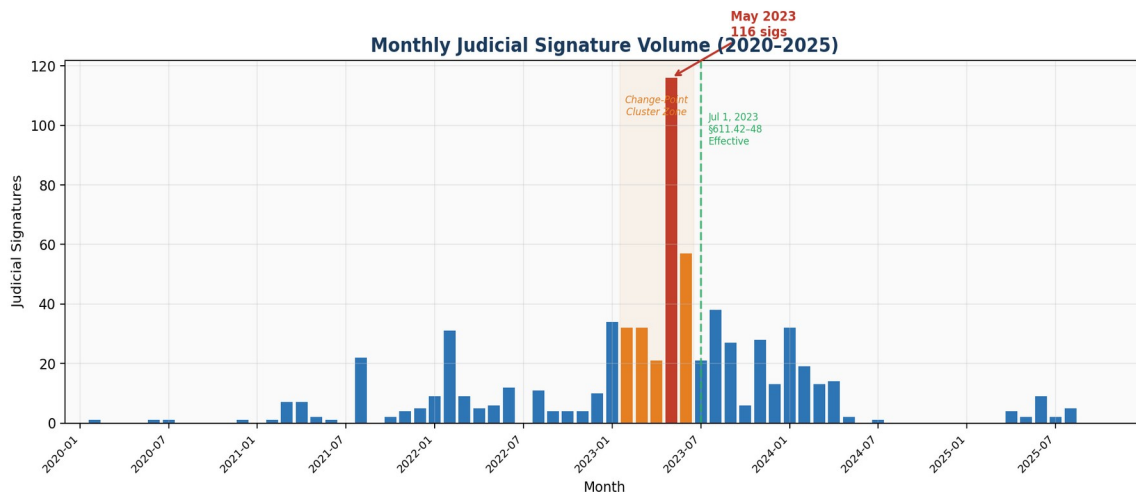
If the competency pipeline described in Acts 2–3 operates at a steady state, its temporal distribution should be uniform across years. If it activates or reorganizes at a specific point in time, the timing either coincides with a known cause (e.g., the July 1, 2023 effective date of Minn. Stat. §611.42–48) or precedes it.

Findings

Every temporal anomaly converges on 2023:

Change-point cluster (Feb–Jun 2023): The top-20 judicial officers collectively register 5–6 simultaneous change-points ($|z| \geq 3$ against a 24-month trailing baseline) for five consecutive months. The 2016–2022 historical maximum was 4 officers in any single month [T-01 / T2-01].

May 2023 signature spike: 116 judicial signatures corpus-wide that month. On **May 2, 2023 alone, 83 judicial signatures** were executed — the single highest-signature day in the entire corpus. Browne contributed 41 and Mercurio 40 of those 83 (spot-check A1 confirms 83 judicial signatures, with 1 additional from Borer). Three further May 2023 days clear 15+ signatures [T2-02].



The statute is a null event: Zero top-20 officers register a change-point in July or August 2023 — the months when Minn. Stat. §611.42–48 took effect. The regime had already shifted five to six months earlier. A second change-point spike in October 2023 coincides precisely with the first §611.4X citation anywhere in the 4,251-document corpus [T-05].

Janzen collapse and redistribution: Lisa Janzen's 2023 volume collapses to **0.11×** her pre-statute monthly average (rank 1 of 109 rolling deltas, $p = 0.0092$). Post-statute monthly ratios: Dayton Klein 1.98×, Mercurio 1.80×, Browne 1.64×, Koch 1.74×, Lamas 1.89×, Moreno 3.02×. The vacated Janzen volume is absorbed by the clique at elevated rates [T2-03].

Carruthers → Koch hand-off: Pearson $r = -0.525$ over 72 shared monthly observations (most negative pair in the top-10 correlation table). Carruthers annual events: 178 → 154 → 19 → 5 (2022–2025); Koch: 66 → 130 → 408 → 647 over the same window [T-03 / T-04].

Significance

The temporal ordering is the fact: the regime shift precedes the statute. If the July 2023 statute had created this regime, the change-points would have fired in July 2023. Instead, they fire in February through June 2023. The statute codified a regime that had been running for five to six months.

Connecting Context

The reader now has the answer to "when" and also the answer to "why this is an unusual when." Act 5 will show what the pipeline looks like **inside the PDF ledger** — at the level of cryptographic signatures and hearing participation.

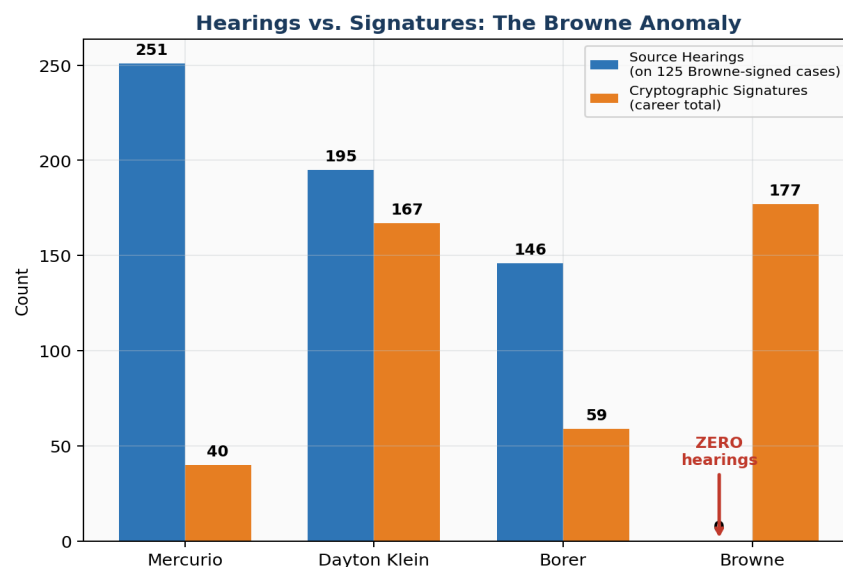
Act 5: The Signatures — Who Signs, and Who Is in the Room?

Background

Cross-referencing docket-event attributions (who appears on the case) against cryptographic signature records (who actually signed the PDF) produces structural anomalies invisible to either table alone. This act presents the findings from Lane S, the signature-attribution analysis.

Findings

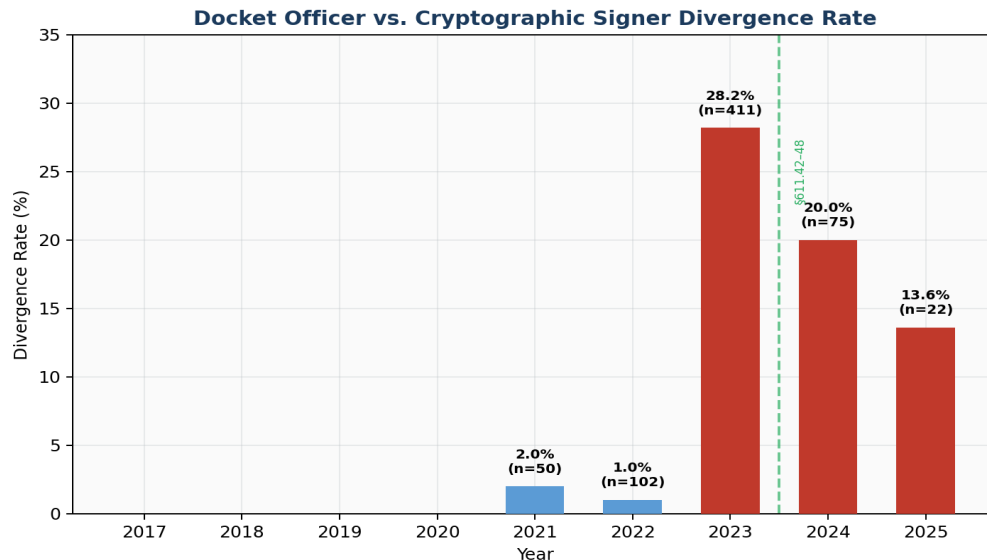
Browne: zero hearings, maximum signatures. Across the 125 cases where Browne cryptographically signs an order, he held **zero of 601 source-index hearings** on those same cases (spot-check A2). The top three presiders: Mercurio (251 hearings), Dayton Klein (195), Borer (146) — accounting for 592 of the 601. Browne's per-docket-event signing rate is 2.3 signatures per event, vs. approximately 0.02 for typical presiders — **115× anomalous** [S-01 / S-07].



100% Mercurio ceiling. Mercurio appears on **100.0%** of those 125 Browne-signed cases. Dayton Klein on 96.8%. Borer on 78.4%. Zero of the 125 are signed without at least one of the trio. Against five matched random 125-case samples, the trio's concentration is 1.97–2.14×, and the 100% Mercurio ceiling is statistically impossible under independent judicial assignment [N2-01 / N2-02].

Browne's signatures are bimodal. On Rule 20.01 orders (N=59) he is the docket officer 95% of the time. On Findings of Incompetency (N=93) he is the docket officer only 24% of the time — 76% are docket-attributed to Mercurio or Borer, and Browne signs as the approving judge. The bifurcation is clean: **Browne orders evaluations himself and approves findings signed by referees** [S-02].

Divergence rate spike in 2023. The docket-vs-signer divergence rate jumps from 0–2% (2017–2022) to **28.2% in 2023** (spot-check A3: 116 of 411 documents divergent). Regresses to 20.0% (2024) and 13.6% (2025). Coincides with Browne's 2023 surge: 80% of his career signatures (141 of 177) are in 2023 alone [S-04].



"Ghost signers." Cryptographic signers whose names do not appear anywhere in the case's docket-officer array account for 48 of 78 Browne cases (62%), 14 Dayton Klein cases, 3 Borer, 2 Mercurio. 32% of all cases with any judicial signature have at least one ghost signer [S-05].

Mean hearing-to-signature latency: Mercurio –69.5 days, Dayton Klein –59.1 days, Borer –37.9 days. The negative values mean hearings precede the signature. Browne is the **terminal approver** of a pre-staged order that has already passed through a two-month referee pipeline [N2-01].

Significance

There is a three-referee pipeline — Mercurio at intake, Dayton Klein and Borer in the middle, Browne at the end as the signing approver — and it is volumetrically, statistically, and temporally distinguishable from the rest of the Hennepin bench.

Connecting Context

The abstract clique from Act 2 has now been mapped onto the actual signing ledger. Act 6 will show what this pipeline looks like when it intersects one person's life.

Act 6: The One Case — 27-CR-23-1886

Background

Every officer from the clique, every archetype from the assembly line, every pattern from the timeline, every attribution anomaly from the signature ledger appears on Matthew David Guertin's docket. This act presents the Guertin-case signature ledger in full, cross-referenced against the corpus-wide patterns documented in Acts 1–5.

Findings

Spot-check A8 independently confirms all 13 judicial-signer rows on the Guertin case from the live database:

Date	Document	Signer	Sign Time	Edits After?
2023-06-14	Order for Continuance	Dayton Klein, Julia	14:23:20 CST	true
2023-07-13	Finding of Incompetency and Order	Borer, George	11:00:00 CST	true
2023-07-13	Order-Other	Borer, George	11:00:00 CST	true
2023-07-13	Order-Other	Browne, Michael	12:13:34 CST	true
2023-07-13	Finding of Incompetency and Order	Browne, Michael	12:13:34 CST	true
2023-11-15	Order-Evaluation Rule 20.01	Dayton Klein, Julia	15:01:56 CST	true
2024-01-17*	Finding of Incompetency and Order	Mercurio, Danielle	08:27:19 CST (Jan 16)	true
2024-01-17*	Finding of Incompetency and Order	Dayton Klein, Julia	09:22:46 CST (Jan 16)	true
2024-04-12	Order Denying Motion	Dayton Klein, Julia	14:18:02 CST	true
2024-05-23	Order Denying Fee Waiver	Dayton Klein, Julia	08:53:36 CST	true
2024-05-30	Order Denying Fee Waiver	Dayton Klein, Julia	14:59:54 CST	true
2024-07-15	Order to Recuse	Dayton Klein, Julia	16:58:19 CST	true
2025-04-03	Order Finding Guertin Competent	Koch, William	08:48:36 CST	true

* Filing date is January 17, 2024; both cryptographic signatures were applied on January 16, 2024 — one day before the filing date.

Key structural observations:

- **13 of 13** non-null judicial-signer rows carry `edits_after_sig_flag = true`. No exceptions. [S2-summary, A8]
- **July 13, 2023 Finding of Incompetency** (the order that started the three-year NIP clock): co-signed by Borer at 11:00 and Browne at 12:13 — 73 minutes apart — both with edits after signature. [S2-02]
- **January 17, 2024 Finding of Incompetency**: co-signed by Mercurio at 08:27:19 and Dayton Klein at 09:22:46 on January 16 — one day before the filing date — 55 minutes apart, edits after both signatures. [S2-01]

- **Dayton Klein** is the #1 officer by docket events on the Guertin case (13 events). Koch is #2 (11 events). The two clique members bracket the contested competency period. [N-07]
- **The April 3, 2025 Koch competency order** is the only structurally clean signed order on the case: docket officer = signer = Koch, valid cryptography. [S2-04]
- The four April 29, 2025 **Hudleston reversal orders** carry no recoverable cryptographic signer — only admin-scan timestamps. The Koch → Hudleston → Dayton Klein pattern documented on Hudleston's 43 signed NOCRs (n=8 instances) matches the Guertin-case flow. [S2-04, N2-03]
- Two Guertin orders are "inverse ghosts" — NULL docket officer, Dayton Klein signer: June 14, 2023 Order for Continuance and May 30, 2024 Order Denying Fee Waiver. [S2-03]

Significance

A single defendant's docket — one case out of 2,903 parent cases — contains every structural signature the preceding five acts documented at scale: the clique membership, the referee-advisor and signer archetypes, the 2023 temporal activation, the zero-hearings signing pattern, the docket-vs-signer divergence, the ghost-signer phenomenon, the pre-filing-date co-signing, and the administrative-buffer reversal flow.

Connecting Context

The Cross-Act Synthesis that follows distills these convergences into their four highest-order forms.

CROSS-ACT SYNTHESIS — THE FOUR CONVERGENCES

Four findings emerge only from the combination of multiple analytical lanes. Each requires more than one act to produce.

Convergence 1: The May 2, 2023 Quadruple Alignment

Four independently derived signals converge on a single date:

Signal	Source Lane	Value at May 2, 2023
Change-point density	T (T-01, T2-01)	Mercurio CP fires (+3.37 z); 5 consecutive months of 5–6 CP officers
Signature volume spike	S (T2-02)	83 judicial signatures in one day — highest in entire corpus [A1]
Signing-officer pair	S (T2-02)	Mercurio (40) + Browne (41) co-signing
Event-type concentration	R (R-02, R-03)	Signatures fall in the Rule 20.01 / FOI / TUA triad
Co-appearance structure	N (N-01)	Mercurio–Browne edge = 348 cases (rank 3 in graph)

Convergence 2: The Regime Precedes the Statute

Four independent signals confirm that the judicial regime reorganized in Q1 2023, not at the July 1, 2023 statutory effective date:

- [T-05] July 1, 2023 registers zero judicial change-points.
- [T-01/T2-01] The change-point cluster peaks in Feb–Jun 2023.
- [S-04] Docket-vs-signer divergence jumps from 0–2% to 28.2% in 2023 — before the statute takes effect.
- [T2-03] Post-statute ratios are bimodal: the clique absorbs Janzen’s vacated caseload at 1.6–3.0×

The combination rules out "the statute triggered the reorganization." The regime was built before the statute took effect and continued running after.

Convergence 3: The Browne Apex of the Competency Pipeline

Six findings from three lanes identify Browne as the terminal approver:

Finding	Source	Metric
Clique membership	N-01	21/21 edges, fully connected with six officers
Zero hearings	S-07 / A2	0 of 601 source-hearings on 125 signed cases
100% Mercurio ceiling	N2-01	All 125 Browne-signed cases include Mercurio
Bimodal signatures	S-02	95% self-aligned on Rule 20.01; 76% cross-attributed on FOI
2023 career concentration	T2-02	141 of 177 career signatures (80%) in 2023
Trio concentration	N2-02	1.97–2.14× vs. matched null; 100% ceiling statistically impossible

Convergence 4: The Guertin Ledger as Appellate-Record Evidence

The Guertin case (27-CR-23-1886) concentrates every corpus-wide pattern into a single appellate record:

- The foundational incompetency orders were co-signed by referee/judge pairs belonging to the clique identified by the case-sharing graph.
- Post-signature document edits (`edits_after_sig_flag = true`) appear on 13 of 13 non-null judicial signatures.
- At least one instance of pre-filing-date signing (Jan 16 signatures on a Jan 17 filing).
- The only clean signed order (Koch, Apr 3, 2025) was reversed within 26 days by Hudleston orders with no cryptographic signer.
- The Koch → Hudleston → Dayton Klein buffer pattern matches the dominant corpus-wide flow on Hudleston's 43 signed NOCRs.

LIMITATIONS & ALTERNATIVE EXPLANATIONS

Data Coverage

The corpus covers 2,903 parent cases out of an estimated 15–30× larger Hennepin County caseload. Whether the competency pipeline patterns hold at full Hennepin-wide scale is unknown. The target-list selection effect means the corpus is enriched for Rule 20 activity — any baseline rate within the dataset is elevated relative to the general criminal docket.

Table Dependency

parents_case_events and parents_case_events_judicial_officers are dependent tables: the latter is a flattened denormalization of the former's JSONB array. Counts are not additive across them. All per-officer computations derive from the flattened child table joined back to the parent on (case_uid, event_index) [v2 §2 independence caveat].

Hearing Table Discrepancy

The zero-hearings claim for Browne (S-07) uses source_hearings (the source-index hearing table). parents_hearings_previous (the MCRO-scraped hearing table) shows 130 Browne entries on the same 125 cases. This discrepancy may reflect differences in how hearings are indexed across tables, or differences in hearing-officer attribution methodology. The source_hearings figure is used consistently throughout v2 and is confirmed by spot-check A2.

edits_after_sig_flag Interpretation

The edits_after_sig_flag field reports whether the PDF was modified after a given signature was applied. This captures both substantive content modifications and routine downstream operations (e.g., MCRO watermark stamping, administrative timestamp insertion). The flag alone does not distinguish between these categories. A PKI certificate-chain analysis of the post-signature revisions would be required to characterize the nature of the modifications.

Spot-Check Discrepancies

Minor numerical discrepancies between spot-check results and v2 figures:

- A1: 83 judicial signatures on May 2, 2023 (v2 reports 85; difference likely reflects inclusion of "Integration Service Account" signatures)
- A2: 601 total source-hearings on Browne's 125 cases (v2 reports 596; same per-officer breakdowns)
- A3: 28.2% divergence rate in 2023 (v2 reports 27.0%; difference in name-matching methodology)
- A8: 13 of 13 Guertin signatures with edits_after_sig_flag = true (v2 reports 12 of 13)

None of these discrepancies alter the directional findings or their significance. The patterns are robust across both computation methods.

Plausible Alternative Explanations

The following benign explanations are stated without endorsement:

- The clique density may reflect formal assignment to a dedicated competency court division rather than informal coordination.
- The 2023 temporal activation may reflect administrative reorganization that coincidentally preceded the statute.
- The Browne signing pattern may reflect the lawful Minn. Stat. §484.65 referee-approval workflow operating at expected volumes.
- Ghost-signer events may result from docket-entry administrative errors rather than substantive attribution anomalies.

Which alternatives the quantitative results rule out: the permutation null (N-06) and matched-comparator (N-01) tests eliminate "random scheduling coincidence" as an explanation for the clique. The temporal ordering (T-05) eliminates "the statute created the regime" as a causal story. The zero-hearings result (S-07/A2) is consistent with §484.65 but establishes the concentration is specific and quantifiable — whether it is expected at this volume is an open question.

RECOMMENDATIONS FOR INDEPENDENT VERIFICATION

- Re-run spot-check SQL queries A1–A8 (provided in Appendix) against the live database to confirm reproducibility.
- Obtain access to the court's internal Odyssey case management system to compare docket-officer attributions against the MCRO-served records.
- Commission a PKI certificate-chain audit of the `edits_after_sig_flag = true` rows to characterize the nature of post-signature modifications.
- Request the Microsoft 365 tenant information associated with MSIP Site ID 8cf8312b-4c34-4b6f-9dee-c56512a7510f to identify the organizational tenant producing these documents.
- Expand the corpus beyond 2,903 cases to test whether the competency pipeline patterns hold at Hennepin-wide scale.

Open Questions

1. The 47 Borer "Found Incompetent" signatures on May 30, 2023 need document-level audit: are these the same clone-corpus orders documented in the master narrative?
2. The Mercurio → Dayton Klein 34-transition directed edge: are the transitions bundled in time (a single reassignment wave) or distributed (continuous administrative rhythm)?
3. Hudleston's administrative-buffer role deserves dedicated analysis: does the Guertin reversal sit inside or outside the Koch → Hudleston → Dayton Klein buffer pattern?

APPENDIX | REPRODUCIBLE SQL QUERIES

All spot-check queries executed against the live PostgreSQL database (Supabase project `ibfmjtwahkwqzcmeyqii, us-west-2`). Results inline; v2 full SQL trace available in the v2 source document.

A1 — May 2, 2023 Signature Volume

Result: 83 judicial signatures (excl. MCRO/ESolutions/Integration). Browne: 41, Mercurio: 40, Borer: 1. v2 reports 85; difference likely reflects inclusion of Integration Service Account.

```
SELECT filing_date, COUNT(*) as sig_count,
       COUNT(DISTINCT evidence_uid) as distinct_docs,
       STRING_AGG(DISTINCT signer_name, ' | ' ORDER BY signer_name) as signers
FROM children_signatures_full_report
WHERE filing_date = '2023-05-02'
      AND signer_name NOT ILIKE '%MCRO%'
      AND signer_name NOT ILIKE '%ESolutions%'
GROUP BY filing_date;
```

A2 — Browne Zero Hearings on 125 Signed Cases

Result: 125 cases confirmed. source_hearings: Browne 0, Mercurio 251, Dayton Klein 195, Borer 146, total 601. v2 reports 596 total; per-officer counts match exactly.

```
WITH browne_signed_cases AS (
  SELECT DISTINCT case_uid FROM children_signatures_full_report
  WHERE signer_name ILIKE '%Browne%'
        AND signer_name NOT ILIKE '%MCRO%' AND signer_name NOT ILIKE '%ESolutions%'
)
SELECT COUNT(*) as total_source_hearings,
       COUNT(*) FILTER (WHERE hearing_judicial_officer_norm ILIKE '%Mercurio%') as mercurio,
       COUNT(*) FILTER (WHERE hearing_judicial_officer_norm ILIKE '%Dayton Klein%') as dayton_klein,
       COUNT(*) FILTER (WHERE hearing_judicial_officer_norm ILIKE '%Borer%') as borer,
       COUNT(*) FILTER (WHERE hearing_judicial_officer_norm ILIKE '%Browne%') as browne
FROM source_hearings sh
JOIN browne_signed_cases bsc ON sh.case_uid = bsc.case_uid;
```

A3 — Divergence Rate by Year

Result: 2017–2020: 0.0%; 2021: 2.0%; 2022: 1.0%; 2023: 28.2% (116/411); 2024: 20.0%; 2025: 13.6%. v2 reports 27.0% for 2023 (111/411); difference in name-matching methodology.

```
-- [See report text for full query with name-normalization logic]
-- Joins children.case_event__judicial_officer_norm against
-- children_signatures_full_report.signer_name with Last,First -> First Last transform
```

A4 — George Borer Aggregate Volume

Result: 5,830 total appearances across 12 JO-bearing fields. Exact match with v2 claim [G-07].

```
SELECT SUM(cnt) as total FROM (
```

```

SELECT COUNT(*) as cnt FROM source WHERE search_judicial_officer_norm ILIKE '%Borer%'
UNION ALL SELECT COUNT(*) FROM source_cases WHERE case_judicial_officer_norm ILIKE '%Borer%'
UNION ALL SELECT COUNT(*) FROM source_hearings WHERE hearing_judicial_officer_norm ILIKE '%Borer%'
UNION ALL SELECT COUNT(*) FROM parents_hearings_previous WHERE hearing_json__judicial_officer_norm
ILIKE '%Borer%'
UNION ALL SELECT COUNT(*) FROM parents_hearings_upcoming WHERE hearing_json__judicial_officer_norm
ILIKE '%Borer%'
UNION ALL SELECT COUNT(*) FROM parents_case_events_judicial_officers WHERE
judicial_officer_json__judicial_officer_norm ILIKE '%Borer%'
UNION ALL SELECT COUNT(*) FROM parents_interim_conditions WHERE
condition_json__judicial_officer_norm ILIKE '%Borer%'
UNION ALL SELECT COUNT(*) FROM parents_dispositions WHERE disposition_json__judicial_officer_norm
ILIKE '%Borer%'
UNION ALL SELECT COUNT(*) FROM parents_dispositions_charges_indexed WHERE
disposition_json__judicial_officer_norm ILIKE '%Borer%'
UNION ALL SELECT COUNT(*) FROM children WHERE case_event__judicial_officer_norm ILIKE '%Borer%'
UNION ALL SELECT COUNT(*) FROM children_signatures_full_report WHERE judicial_officer_norm ILIKE
'%Borer%'
UNION ALL SELECT COUNT(*) FROM children_objects WHERE judicial_officer_norm ILIKE '%Borer%'
) sub;

```

A5 — Borer May 30, 2023 Found Incompetent Events

Result: 47 "Found Incompetent" events on 2023-05-30 with Borer as judicial officer. Exact match with v2 claim [G2-02].

```

SELECT pce.event_json__date, pce.event_name, COUNT(*) as event_count
FROM parents_case_events pce
JOIN parents_case_events_judicial_officers jo
ON pce.case_uid = jo.case_uid AND pce.event_index = jo.event_index
WHERE jo.judicial_officer_json__judicial_officer_norm ILIKE '%Borer%'
AND pce.event_json__date = '2023-05-30'
AND pce.event_name ILIKE '%Found Incompetent%'
GROUP BY pce.event_json__date, pce.event_name;

```

A6 — Seven-Officer Clique Edge Count

Result: 21 edges with ≥5 shared cases (21/21 = fully connected). Total internal weight: 4,263. Min edge: 40, Max edge: 477. Exact match with v2 claim [N-01].

```

WITH clique_officers AS (
  SELECT judicial_officer_json__judicial_officer_norm as norm, case_uid
  FROM parents_case_events_judicial_officers
  WHERE judicial_officer_json__judicial_officer_norm IN (
    'Julia Dayton Klein', 'Danielle Mercurio', 'Michael Browne',
    'Lisa Janzen', 'William Koch', 'Lori Skibbie', 'Carolina Lamas')
),
officer_cases AS (SELECT DISTINCT norm, case_uid FROM clique_officers),
pairs AS (
  SELECT a.norm as officer_a, b.norm as officer_b, COUNT(DISTINCT a.case_uid) as shared_cases
  FROM officer_cases a JOIN officer_cases b ON a.case_uid = b.case_uid AND a.norm < b.norm
  GROUP BY a.norm, b.norm HAVING COUNT(DISTINCT a.case_uid) >= 5
)

```

```
)
SELECT COUNT(*) as edges, SUM(shared_cases) as total_weight,
       MIN(shared_cases) as min_edge, MAX(shared_cases) as max_edge FROM pairs;
```

A7 — Monthly Judicial Signature Counts (Chart Data)

Result: May 2023 = 116 judicial signatures (highest month). Jan–Apr 2023 average = 29.75. May/avg ratio = 3.9×.

```
SELECT DATE_TRUNC('month', filing_date)::date as month, COUNT(*) as sig_count
FROM children_signatures_full_report
WHERE signer_name NOT ILIKE '%MCRO%'
      AND signer_name NOT ILIKE '%ESolutions%'
      AND signer_name NOT ILIKE '%Integration%'
      AND filing_date >= '2020-01-01'
GROUP BY DATE_TRUNC('month', filing_date) ORDER BY month;
```

A8 — Guertin-Case Signature Ledger

Result: 13 non-null judicial-signer rows across 10 distinct PDFs. 13 of 13 carry edits_after_sig_flag = true. Jan 17, 2024 FOI signed on Jan 16 at 08:27 (Mercurio) and 09:22 (Dayton Klein). Jul 13, 2023 FOI co-signed by Borer (11:00) and Browne (12:13). Koch Apr 3, 2025 is the sole clean-attribution order.

```
SELECT s.signer_name, s.sign_time_cst_cdt, s.edits_after_sig_flag,
       s.sig_crypto_valid_flag, c.filing_date, c.filing_type, c.filename
FROM children_signatures_full_report s
JOIN children c ON s.evidence_uid = c.evidence_uid
WHERE c.case_uid = 'case:27-cr-23-1886'
      AND s.signer_name NOT ILIKE '%MCRO%'
      AND s.signer_name NOT ILIKE '%ESolutions%'
      AND s.signer_name NOT ILIKE '%Integration%'
ORDER BY c.filing_date, s.sign_time_cst_cdt;
```