

---

When I first encountered Urbit, it was like Mr. Electroco touching twelve-year-old Ray Bradbury with a charged sword and commanding him to “live forever!” The vision of unfolding but comprehensible complexity was to me a siren song that has led me into rewarding professional relationships and deep friendships. This shape rotator programming has become a lifelong passion and fertile ground of exploration.

This issue of the *Urbit Systems Technical Journal* unveils technical descriptions of significant milestones in Urbit’s ongoing development. `~rovnys-ricfer`, `~master-morzod`, `~watter-parter`, `~dinleb-rambep`, `~norsyr-torryn`, and `~hastuc-dibtux` detail the design and implementation of Urbit’s named data networking scheme, Directed Messaging, a core component of the 2023 “Neo-Urbit” vision. `~dozreg-toplud` expounds the long-anticipated “subject knowledge analysis” paradigm for Hoon static analysis, proposed several years ago by `~ritpub-sipsyl` and long a target for more efficient Hoon compilation to the Nock combinator calculus. `~hanfel-dovned` presents portions of the Groundwire proposal for a revision of Urbit’s peer-to-peer schema beyond Azimuth, a topic of ongoing technical interest in the Urbit developer community. `~ticlys-monlun` and `~lagrev-nocfep` explain how the Nock serialization mechanism for nouns works in detail. And `~nomryg-nilref` reveals in great detail his monumental labor of love that is Obelisk, a return to E. F. Codd’s relational algebra and `SQL`. Each article represents years of design and engineering work, and we are proud to present them to the Urbit community.

As of 2025, *USTJ* has become a sponsored product of the Groundwire Foundation, a new nonprofit entity dedicated to Urbit’s core development and improving support for Bitcoin integrations into the Urbit ecosystem.

Computer science happens in the trenches. ☀