Blockchain Building Blocks

The **University of California-Irvine** held a recent conference devoted to blockchain, a digital ledger technology that shows potential for reliably tracking titles to property; provenance of precious goods; ownership of art and intellectual property; and securing of supply chains for software and other critical areas.

The complex technology, steeped in mathematical engineering, coding and third-party authentications, is being tested by the likes of **IBM**, **Walmart** and **Bank of America**.

In clear terms, "It's a simple database that records transactions," **Quinn Dupont**, a research associate at the **University of Washington** and author of "Cryptocurrencies & Blockchains," told the conference crowd.

"The strong potential and urgent need for emerging cyber-based technologies to protect national security supply chains, particularly in the defense industry, was evident at our conference," **Bryan Cunningham**, executive director at UCI's Cybersecurity Policy & Research Institute, told the Business Journal after the event.

Tracy Frost, director of manufacturing technology at the U.S. Department of Defense, said the agency is exploring several blockchain applications as it struggles to verify vendors, products and components.

"We don't know everybody in our supply chain," she said during a 60-minute keynote address.