

Ultra-Dense Human-Readable Data Storage

ID: 2023-053

Executive Statement:

A novel invention for permanent, high-density data storage readable with simple equipment.

Description:

This technology uses PET substrates, similar to those in magnetic tape storage, combined with an energy beam, such as an electron beam, to create a data storage system that can last over 1,000 years. It records data in a human-readable format, accessible with basic tools like microscopes, eschewing the need for digital readback systems.

Key Advantages:

- Longevity exceeding 1,000 years.
- Human-readable data storage without specialized digital tools.
- Utilizes existing PET substrate technology.
- High data density compared to current long-term storage solutions.

Problems Solved:

- Dependence on digital technology for data readback, risking obsolescence.
- Limited lifespan of current data storage solutions.
- Difficulty in achieving high-density storage in permanent formats.

Market Applications:

- National archives and libraries for document preservation.
- Museums for archival of historical data.
- Corporate and personal archives for long-term data storage.
- Areas requiring data longevity without the need for future technology compatibility.