"Archival Disc" standard for professional-use next-generation optical discs

March 10 2014

Sony and Panasonic today announced that they have formulated "Archival Disc", a new standard for professional-use, next-generation optical discs, with the objective of expanding the market for long-term digital data storage*.

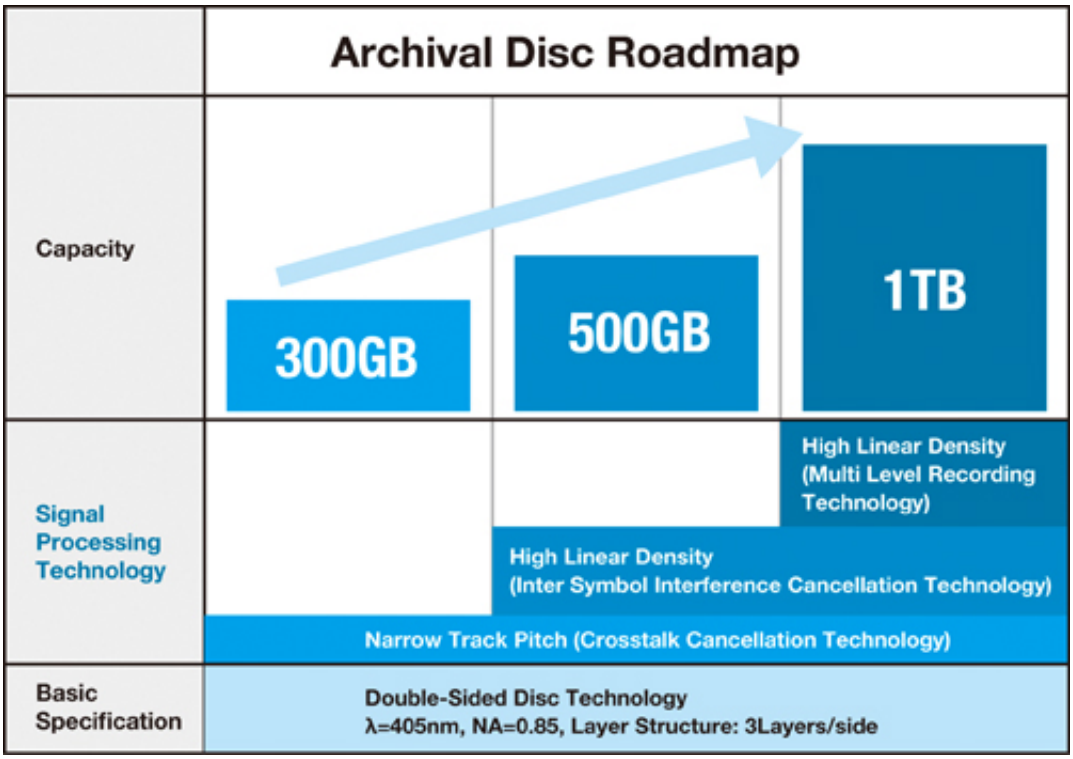
Optical discs have excellent properties to protect themselves against the environment, such as dust-resistance and water-resistance, and can also withstand changes in temperature and humidity when stored. They also allow inter-generational compatibility between different formats, ensuring that data can continue to be read even as formats evolve. This makes them robust media for long-term storage of content. Recognizing

that optical discs will need to accommodate much larger volumes of storage going forward, particularly given the anticipated future growth in the archive market, Sony and Panasonic have been engaged in the joint development of a standard for professional-use next-generation optical discs.

These efforts resulted in the formulation of "Archival Disc", a new professional-use next-generation optical disc standard, for which the technology roadmap, logo, and specifications are outlined below.

Roadmap

Both Sony and Panasonic aim to launch systems with a recording capacity of 300 GB per disc from summer 2015, onwards. In addition, both companies plan to leverage their respective technologies to further expand the recording capacity per disc to 500 GB and 1 TB.



Key Archival Disc specifications

- **Disc size (type)** 300 GB (write-once)
- **Optical parameter** Wavelength λ=405 nm (nanometers), Numerical Aperture NA=0.85
- **Disc structure** Double-sided Disc (3 layers/side), Land and Groove Format
- **Track pitch** 0.225μm (micrometers)
- **Data bit length** 79.5nm (nanometers)
- **Error correction method** Reed-Solomon Code

Crosstalk cancellation technology and high-order Partial Response Maximum Likelihood (PRML) signal processing technology have been employed to achieve both larger capacity and higher playback signal quality.

Provided by Sony