

MiniDisc as a format
connecting the music media
technologies of the 1990s



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Interests to MDs in the 2020s

- “International MiniDisc Day” started from 2020
- eBay: expansion of used market
- 30th anniversary!!

	<p>SONY MD Minidisc complete Series Mz 1992-2000 NEAR PERFECT Parts Only</p> <p>JPY 275,917 Buy It Now +JPY 6,933 shipping from Italy</p>
	<p>Ultra Rare for Collectors Sony Hi-MD Walkman Digital Music Player (MZ-RH910/BM) Brand New</p> <p>★★★★★ 1 product rating</p> <p>JPY 246,693 or Best Offer +JPY 10,568 shipping from United Kingdom</p>
	<p>Sony Hi-MD Walkman - Digital Audio Player/Recorder (MZ-RH1/B) Pre-Owned</p> <p>★★★★★ 18 product ratings</p> <p>JPY 246,693 or Best Offer +JPY 10,568 shipping from United Kingdom</p>

**INTERNATIONAL
MINIDISC DAY 2021**
JUNE 5TH

FEATURING MORE THAN 50 OFFICAL
RELEASES FROM LABELS INCLUDING:

© AV limited™ • Adeptus Minor • Aloe City Records
Beetawave Records • Black Ring Rituals Records
Fennec Records • Fish Prints • GIVE/TAKE
Groove Remote • Husk Recordings • Kanga Corp
Lemon Lime Music • MiniDisc.Me • My Pet Flamingo
n5MD • NeedleJuice Records • Nitrate Records
Pacific Plaza Records • Retro Reverb Records
Seaside Tapes • Serotonin Jackalope • SOUR
Strange Noise Records • TimeSlave Recordings
Underwater Computing_ • Wave Racers Collective



Plus self released titles by:
Gryff • Benjamin Gibert • AV 0
Desolation Plains • Isaac Challis Eaton

FULL LINE-UP PUBLISHED SATURDAY MAY 29TH

Today's outline

- Understanding the process of acceptance of "digitization" in the technical, institutional, and practical sense for music listening in Japan.
 - The MD was the earliest "user-oriented digital recording medium" that included three digital technologies as formats:
 - Optical discs, digital rights management systems, and audio compression technology.
- (1) The perspective of "format theory".
 - (2) The combination of formats and practices of MDs in the 1990s.

General understanding of MD's history

- MD is understood as a defeated recording medium...
- Widely used in Japan, but globally only a niche product.
- Replacing cassette tapes, and defeated by Digital Audio Players /iPod.



Perspective of **Format Theory**: Jonathan Sterne

- “MP3: The Meaning of a Format” (2012)
 - If there is such a thing as media theory, there should also be format theory. (Sterne: 7)
 - *Format* denotes a whole range of decisions that affect the look, feel, experience, and workings of a medium. It also names a set of rules according to which a technology can operate. (Sterne: 7)
- All media is composed of a combination of formats, and formats dictate the appearance and usage of media.

Perspective of **Format Theory**: Jonathan Sterne

- **Mediality**;

I use the term *mediality* (and *mediatic* in adjectival form) to evoke a quality of or pertaining to media and the complex ways in which communication technologies refer to one another in form or content. (Sterne: 9)

- Individual media are in a condition of mediality, where they refer to each other through the formats they contain.
- What is thought of as the specificity of each media is neither self-evident nor autonomous.

Perspective of **Format Theory**: Jonathan Sterne

- The formats that define how media work are widely represented in;
 - Technical arrangements such as mechanisms and protocols.
 - Institutional rules such as legal systems and industry standards.
 - Contexts of use.
- Considering from micro to macro scales of conditions.

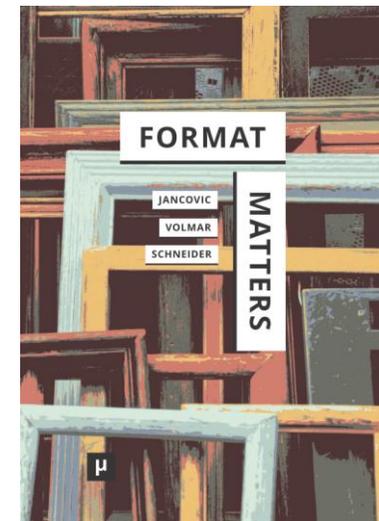
Studying formats highlights smaller registers like software, operating standards, and codes, as well as larger registers like infrastructures, international corporate consortia, and whole technical systems. (Sterne: 11)

Perspective of **Format Theory**: Axel Volmar

- Format theory is a cognitive framework that illuminates the interconnections between media rather than a single medium history.

One could argue that, more generally speaking, format studies would then have the task of contextualizing, historicizing, and theorizing such connections that connect or “cut across” media. (Volmar: 29)

- Five types of formats
 1. Size-and-Shape Formats
 2. Diagrammatic and Structural Formats
 3. Encoding and Data Formats
 4. Metaphorical Formats
 5. Narrative and Processual-Event Formats

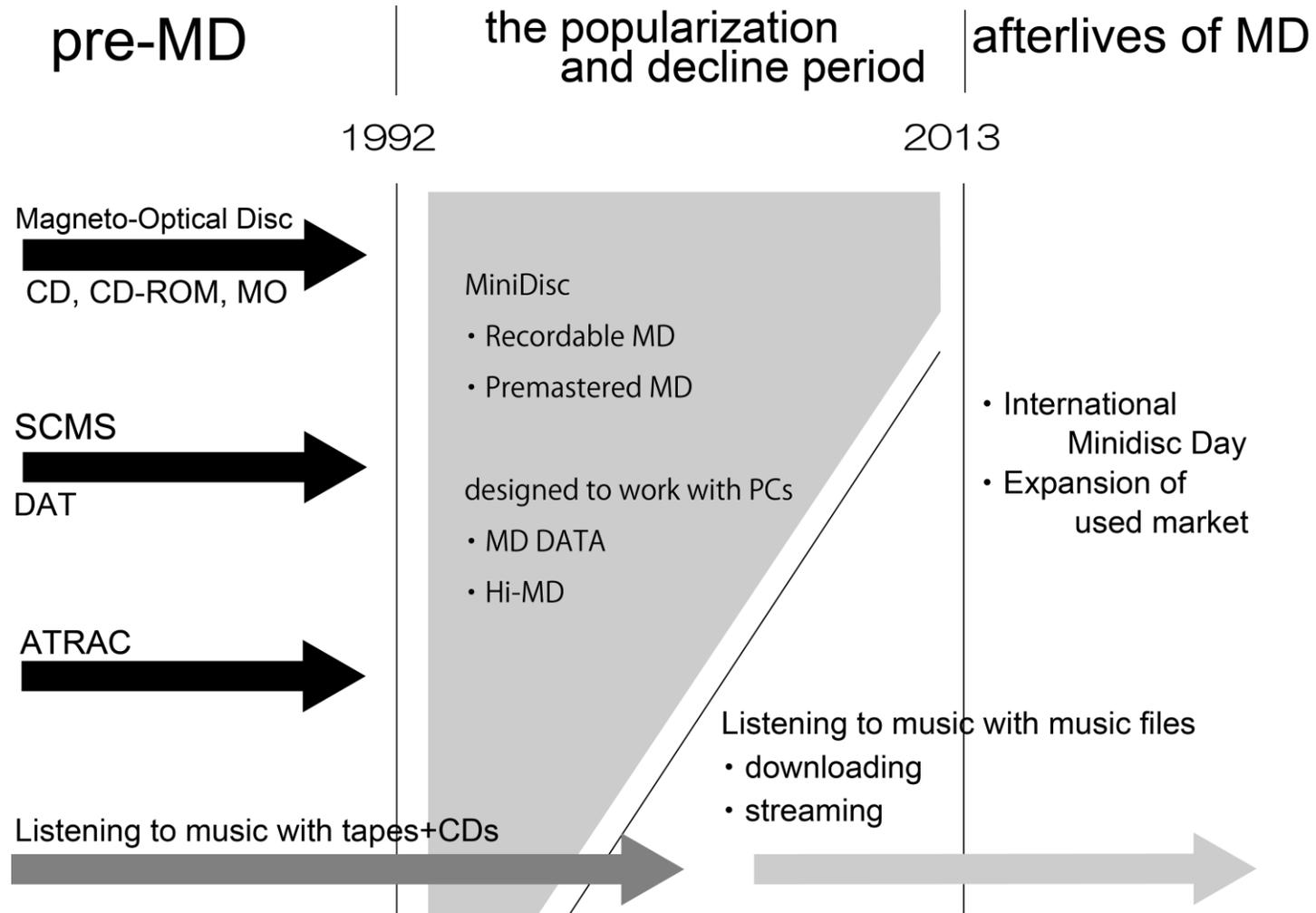


“Format Matters: Standards, Practices, and Politics in Media Cultures”

Perspective of **Format Theory**: Axel Volmar

- Common features and functions of formats
 - Structuring physical media and content.
 - Forming relationships with the media itself and the surrounding infrastructure.
 - Economic feasibility is stronger than technical feasibility: Standardization.
1. The relationship between format and practice.
 2. Formats allows the cooperation as an interface.
 3. Tracing dynamics of specialization and generalization.

Formats of MiniDisc



Formats of MiniDisc

- MD's advantages in SONY's catalog

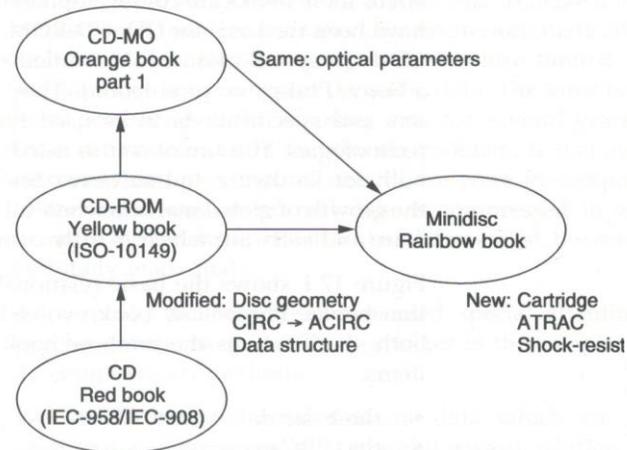
1. Enabling quick and random access, similar to CD.
2. Digital disc format, high quality up to CD.
3. Editing features, edit song titles and data for each song with TOC.
4. Smaller than CD, lightweight and inexpensive.
5. Durable with cartridge.
6. High shock-proof capability.

MD Format Technology

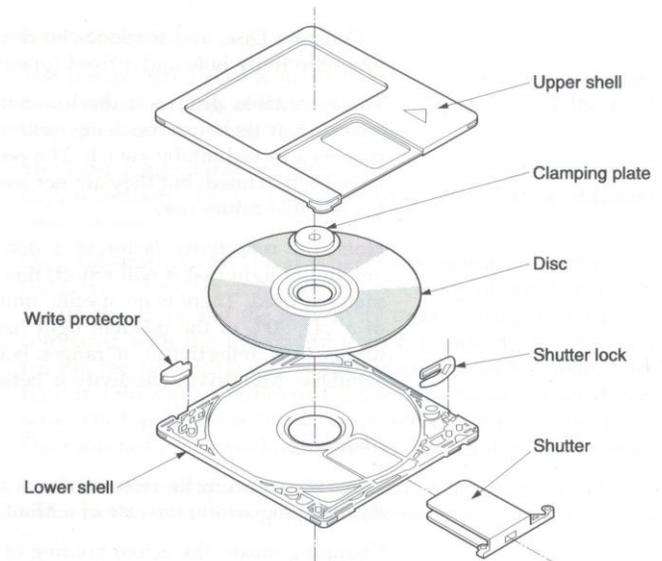
- Referential relationships with other media when the MD format was formulated.
 1. Magneto-Optical Disc
 2. SCMS (Serial Copy Management System)
 3. ATRAC (Adaptive TRansform Acoustic Coding)

MD Format Technology: **Magneto-Optical Disc**

- “Rainbow Book”:
 - Red Book (CD)
 - Yellow Book (CD-ROM)
 - Orange Book (MO)
 - Ensuring compatibility for manufacturers.



- The “Philosophy” of SONY’s engineers on magnetic recording (Ihashi: 75)



MD Format Technology: **SCMS**

- **SCMS (Serial Copy Management System)**
 - Preventing infinite digital copying and permitting only one generation of digital copying.
- **The SCMS mechanism was taken over from DAT (Digital Audio Tape).**
 - The result of negotiations between manufacturers and the recording industry.



MD Format Technology: **ATRAC**

- **ATRAC (Adaptive TRansform Acoustic Coding)**
 - Audio compression technology: using uses auditory psychological phenomena.
- **ATRAC3 files could also be processed on PCs**
 - SONY's "bitmusic" in December 1999, the first internet music distribution.

User's practices and formats in the 1990s

- Space and MiniDisc: same as cassette tapes
- Premastered disc: same as CDs
- Air-checking: off-the-air by listeners
- Editing the data: as a new hobby

ミニディスクで変える、ミニディスクで始まる、新しいミュージックライフ。



これからは、録音も再生も、高音質で使いやすいディスクの時代です。

ディスクには録音・再生ができる「録音用MD」と再生専用の「MDソフト(音楽ソフト)」の2種類があります。ともにポケットにすっぽり納まる軽量コンパクトサイズ。小さなサイズと新しい機能で、今まで経験できなかった楽しさを実現します。



Closing Remarks

- The points that MD format research should consider in the future.
 - The reference relationship with the CD family expressed in the magneto-optical disc.
 - The technical system of digital rights management taken over from DAT.
 - Music files generated by applying audio compression technology.

References

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Thank you for listening!!

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