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October 7, 2004
Handling New Media
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FILE FORMATS

File Format Name: mp3 (a.k.a. MPEG (Moving Picture Experts Group) Audio Layer - III

File Extension(s): .mp3

Date Introduced: (year) Approved in 1992. First developed by Fraunhofer Institut fur Integrierte Schaltungen in German in 1987, patented in 1989 and incorporated into MPEG specifications in 1992.

Dates in Use: (years): Although mp3 was introduced in late 1992, software players to support it weren't introduced until 4 years later, and portable players until 6 years later.

Variations: mp3 Pro. This is an updated version of the original mp3 codec allowing small, low-bitrate files to contain much more high-frequency detail than standard mp3 files encoded at similar low bitrates.

Developers: Fraunhofer Gesellschaft (FhG) and Thomson Multimedia Corporation

Open Source/Proprietary: open source (however, it is licensed)

Associated Operating System: Windows

Associated Application(s): Winamp, MacAmp, RealJukebox, Music MatchJukebox, Audio Catalyst, Audiostocker (a Winamp plugin designed to noramlize playback volume), Audio Converter, Audio Converter Pro, River Past Audio Converter, Audio CD Maker, Sonique 1.96

Associated Media: (storage): Rio 300, 600; Nomad; Jaz Piper; RCA Lyra 2204 (older storage format)

Compression: "Perceptual encoding (a type of "lossy" compression). To compress audio, MPEG encoders first apply a psycho-acoustic model to identify parts of the signal that most people can't hear. The encoder removes these sounds from the signal and then applies standard lossless data compression techniques. 128 kbps (kilobits per second) encoding rate or as high as 320 kbps at 1MB per one minute of music.

MP3 supports both mono and stereo audio, not multi-channel surround sound. Layer III

was designed for better quality at lower bit-rates. The high level of compression achieved by mp3 is very important because of the limited bandwidth of the Internet and the limited space of hard disks. This compression also makes mp3 well suited for portable players that use expensive solid-state memory cards. MP3 is compatible with MPEG 1 & 2 (quoted from *MP3 and Internet Audio Handbook, The: Your Guide to the Digital Music Revolution!*. http://www.teamcombooks.com/mp3handbook/13.htm)."

Primary Usage: Most widespread form of digital audio on the Internet usually downloaded directly, though can be streamed.

Risks: Most audio CD players will not play mp3s burned onto a CD. A separate program is needed to decompress the files into wav before burning.

Condition Assessment: TBD

Conservation Actions: TBD

Resources:

Crutchfield Advisor: The Complete A/V Information website, File Formats Glossary. http://www.crutchfieldadvisor.com/ISEO-rgbtcspd/learningcenter/home/fileformats_glossary.html

Final Download website. http://www.finaldownload.com/products/mp3.html

Fraunhofer Institut fur Integrierte Schaltungen. http://www.iis.fraunhofer.de.amm/techinf/index.html

Information Technology Laboratory (ITL)/National Institute of Standards and Technology (NIST)/Information Access Division (IAD) Digital Media Data Preservation, "Digital Media Formats." http://www.itl.nist.gov/div895/formats.html

Ken Davies Music. http://www.kendavies.net/resources/audioformats/

MP3 and Internet Audio Handbook, The: Your Guide to the Digital Music Revolution!. http://www.teamcombooks.com/mp3handbook/12.htm

MP3 and Internet Audio Handbook, The: Your Guide to the Digital Music Revolution!. http://www.teamcombooks.com/mp3handbook/13.htm

MP3 Tech. http://www.mp3-tech.org/patents.html