

The Echo Nest Remix

The Echo Nest Remix presents unprecedented ways to play *with* music, instead of just playing it. This is true interactive music -- not just as a concept, or a buzzword, but as real technology that scales across millions of audio tracks, associated videos, and many potential applications. The Echo Nest Remix API identifies thousands of actionable events in every song, making it easy for any app developer to create rhythm games, remix apps and user-generated mash-ups with a minimum effort.

Interactive Music

A music fan is not only a music fan, but also a reader, gamer, DJ, movie enthusiast, comedian, and many other things. We like lots of things -- and what we like, we increasingly like to create ourselves and interact with. Most of the recorded music history has seen fans press a play button, sit back, and take in music at their leisure.

The Echo Nest Remix API enables the creation of fresh, engaging music experiences by helping music services of many stripes exploit pre-recorded content in ways that have proven highly attractive to end users, sometimes in unexpected ways -- not just remixes, but everything from music games to “more cowbell!” (see below).

How It Works

The Echo Nest Remix utilizes deep structural music data from the Echo Nest’s Analyze technology, the world’s only music-listening API. Despite its complex underpinnings, this remarkably user- and service-friendly “internet synthesizer” allows the manipulation and synchronization of music and corresponding video as musical objects in all sorts of unexpected, entertaining ways while requiring minimal integration time. End users can freely play with beats, measures, sounds, sections, and other musical building blocks to create remixes, mash-ups, and more, regardless of whether they understand what’s going on underneath the hood (proprietary, perceptually-meaningful sound descriptions, similarity metrics, pattern matching algorithms, intra- and cross-song search, and more).

Remix has perhaps the widest range of potential applications out of our APIs, and it works on millions of songs:

- **Synchronization:** Remix allows partners to overlay sounds and visuals on top of each other in perfect synch, automate the creation of rhythm games, or select and align video to audio in ways that make various kinds of sense. Remix knows the precise time and sonic characteristics of every event and underlying beat in every audio file it analyzes. For some amusing samples of Remix’s possibilities, see morecowbell.dj, donkdj.com and [others](#).
- **Beatmatching:** Much like an automated DJ, Remix identifies the best place where one song should transition to the next, dynamically time-stretches audio, aligns beats, and cross-fades volume to create seamless transitions between any songs at any tempos, with zero customization.
- **Mashups:** Remix lets users or (for that matter software) build quantized mash-up remixes from any two songs, or from simple ideas such as swapping sounds with other sounds or merging two or more songs to create new ones.

- **Scaling:** Remix's analysis and manipulation of the structural content of music, from the repetition of a chorus to individual snare drum hits, leads to novel applications such as summarizing a song with its canonical sections, extending it seamlessly forever, or losslessly compressing it by eliminating duplicate sections during download and reproducing them later using the original.

About The Echo Nest

The Echo Nest is a music intelligence company that connects the greatest application developers to the best data and music to enable the next generation of music experiences. Powered by the world's only machine learning system that actively reads about and listens to music everywhere on the web, The Echo Nest opens up a massive repository of dynamic music data to application developers ranging from one-person operations to multinational corporations. The Echo Nest's customers reach over 100,000,000 music fans every month and include leading music companies such as MOG, Thumbplay, MTV, Rhapsody and the BBC. Over 160 music applications have been built on The Echo Nest platform to date.

The Echo Nest was co-founded by two MIT Media Lab PhDs. Winner of three National Science Foundation SBIR grants, The Echo Nest's investors include Matrix Partners and Commonwealth Capital Ventures, Argos Management and three co-founders of MIT Media Lab. For more information, visit echonest.com or follow The Echo Nest on Twitter [@echonest](https://twitter.com/echonest).