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ABC_DJ: The algorithm that turns brand values into music

Our reactions to music are complex and often personal. So how can a brand accurately choose music that fits its personality and resonates with its audiences? Audio branding agencies typically rely on a medley of creative experience and judgement, scattered research, and consumer feedback to find or create the right music for a brand.

The ABC_DJ research project aims to provide sonic branding agencies with sophisticated tools that support their creative processes. This three

year project was undertaken by seven companies and research institutions across Europe, including the [Technical University \(TU\) of Berlin](#) and audio branding company [HearDis!](#), and received funding from the European Union's Horizon 2020 research and innovation programme.

The result is a powerful algorithm that selects brand-relevant music, based solely on the audio content of the songs rather than manually assigned tags. And it can do this with some accuracy: "The ABC_DJ recommendation algorithm can predict the brand-fit of music or perceived musical expression with an accuracy of 80.1%", explains Dr. Jochen Steffens of TU Berlin. "The theoretical maximum value of 100% can never be reached, because people are and will always have a different reaction to music; this means that 80.1% match will be exceptionally valuable to the industry."

You can judge this for yourself: Here's a piece of music that ABC_DJ predicted to sound bright, playful, and funny.

The ABC_DJ project began by developing a new vocabulary which described music in the audio branding context: the "General Music Branding Inventory". This inventory was then tested in the field, with over 10,000 participants, 28,000 songs, 50,000 measurements, and over 2 million data points. Analysis of this data pinpointed 36 features most relevant to brands and music.

Project partner [IRCAM](#) used machine learning procedures to develop an algorithm that locates acoustic features capable of predicting real listeners' musical judgements. Ultimately, this algorithm is based on four basic factors: emotional valence, emotional arousal, authenticity, and timeliness. These predictions can also be tailored to specific target groups, thanks to the integration of a 'Sinus-MetaMilieus®' model.

Alongside its use as an audio branding tool, the ABC_DJ research has also given new scientific insight into music perception. For example, it

discovered that people perceive music with a high dynamic range (such as blues, classical, and flamenco music) as more authentic, whilst electronic styles, especially those with low micro-dynamics and heavy sub-bass frequencies, are seen as less authentic.

For the ABC_DJ team, the potential benefits are [threefold](#): "Stronger identities for businesses, more meaningful experiences for customers, and better music for everyone". They hope that this research will add breadth to the range of music used by brands and offer artists and independent labels new opportunities for monetisation.

[Fran Board](#)

[Sound research](#)

[ABC_DJ](#), [audio branding](#), [sonic identity](#), [music](#), [music perception](#), [music research](#), [brand identities](#), [marketing](#), [music marketing](#), [TU Berlin](#), [HearDis](#), [EU Horizon](#), [algorithms](#), [musical algorithm](#), [General Music Branding Inventory](#), [IRCAM](#), [brand identity](#), [music monetisation](#)