

Creativity in Digital Music

Ideas for Today and Tomorrow

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Vision Statement

- ◆ Creativity is integral to music technology research on every level.
- ◆ Creativity holds the keys to new methods of collaboration and co-working.
- ◆ Creativity poses new research challenges, and re-frames existing ones.

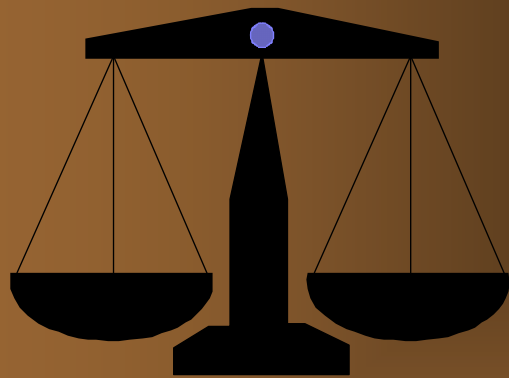
Goals and Objectives

- ◆ Promote better understanding by funding agencies of the contributions made by creative artists.
- ◆ Demonstrate the dynamic nature of collaborative research.
- ◆ Assess potential new areas of interest.

Today's Situation

- ◆ A: Engineering and artistic skills now merged in today's creative industries.
- ◆ B: The relationship between enabling tools and the artist has changed dramatically.
- ◆ C: Training has produced several generations of Music Technologists.

A: Example job spec: a skills balance



- ◆ Digital Audio Technician, Sony Pictures. Nov 03 (now filled).
- ◆ Knowledge of Digital Audio Workstations
- ◆ 3 year's minimum experience Sound Editing and 1 years minimum Sound Design in film post-production.
- ◆ Thorough understanding of TCP/IP and fibrechannel storage systems.
- ◆ 1 year's minimum experience of media-streaming technologies

A: Today's multiskilled world

- ◆ The rise of 'RAD tools' has given creative people new control over technologies, to a point where technological processes are inseparable from creative applications.
- ◆ "Multiskilling is now essential in today's audio industry" (Audio Media, Nov 03).

B: Tools, artists, engineering & research

- ◆ 10 years ago, tools used by media professionals were significantly different from those used within creative research at universities.
- ◆ Universities had open source, capable systems.
- ◆ Commercial audio tools v. limited and closed.

B: Creative tools comparison 1994/2003. Which would you use?

- ◆ Mix in 1994
 - ◆ 9 tracks
 - ◆ Effects
 - ◆ 4 Channel surround
 - ◆ 16 bit, 48k quality
 - ◆ Sgi based
 - ◆ Open source
- ◆ ProTools in 1994
 - ◆ 4 tracks
 - ◆ Limited effects: EQ, compression
 - ◆ No surround options
 - ◆ 16 bit, 48k quality
 - ◆ Mac/DSP based
 - ◆ Closed platform
 - ◆ Very expensive

B: Creative tools comparison 1994/2003. Which would you use?

- ◆ Mix in 2003
 - ◆ 9 tracks
 - ◆ Effects
 - ◆ 4 Channel surround
 - ◆ 16 bit, 48k quality
 - ◆ Sgi based
 - ◆ Open source
- ◆ ProTools in 2003
 - ◆ Up to 128 tracks
 - ◆ Wide variety of 3rd party tools.
 - ◆ 5.1, up to 7.1 surround
 - ◆ 24 bit, 192k quality
 - ◆ Windows/Mac/DSP based
 - ◆ SDK available at a price
 - ◆ Low cost of entry

C: 30 years of training Music Tech

- ◆ How do we formulate collaborative research projects now that we've integrated engineering and creative knowledge into one discipline?

C: Implications for collaborative research

- ◆ Always room for new innovations in either engineering or the arts.
- ◆ Projects which were traditionally collaborative in nature, may not now be so.
- ◆ Domains change: creative problems do not necessarily need engineering solutions and vice versa.

How Did We Get Here?

- ◆ A: University research and industrial needs have diverged in the creative industries.
- ◆ B: Computing technology required to make interesting digital art is now well out of the R&D phase, usable and widely applicable.
- ◆ C: Skills, needs and people change.

Available Options

- ◆ Seek new collaborations between other disciplines & Music Technology.
- ◆ Form new alliances which are able to accommodate creative research in an industrial context. *Creativity is no longer just a 'demonstrator' for technology.*
- ◆ Justify the case for new innovation independently from arts/science collaboration.
- ◆ Lobby EPSRC: this is a unified discipline

Recommendation

- ◆ Promote unity within the community.
- ◆ ..but not at the expense of innovations within the individual components on the research roadmap.
- ◆ Collaboration is good where appropriate, but funders should understand that today's Digital Music Research might be undertaken by single teams with the necessary skills.
- ◆ Current Music Technology not possible without innovative music and innovative technology.

Personal directions

- ◆ Why can't I use grid computing for interactive music?
- ◆ Is technology the answer for sound-spatialisation?
- ◆ Creative work that works with industry to make integrated new media.

Thank you