

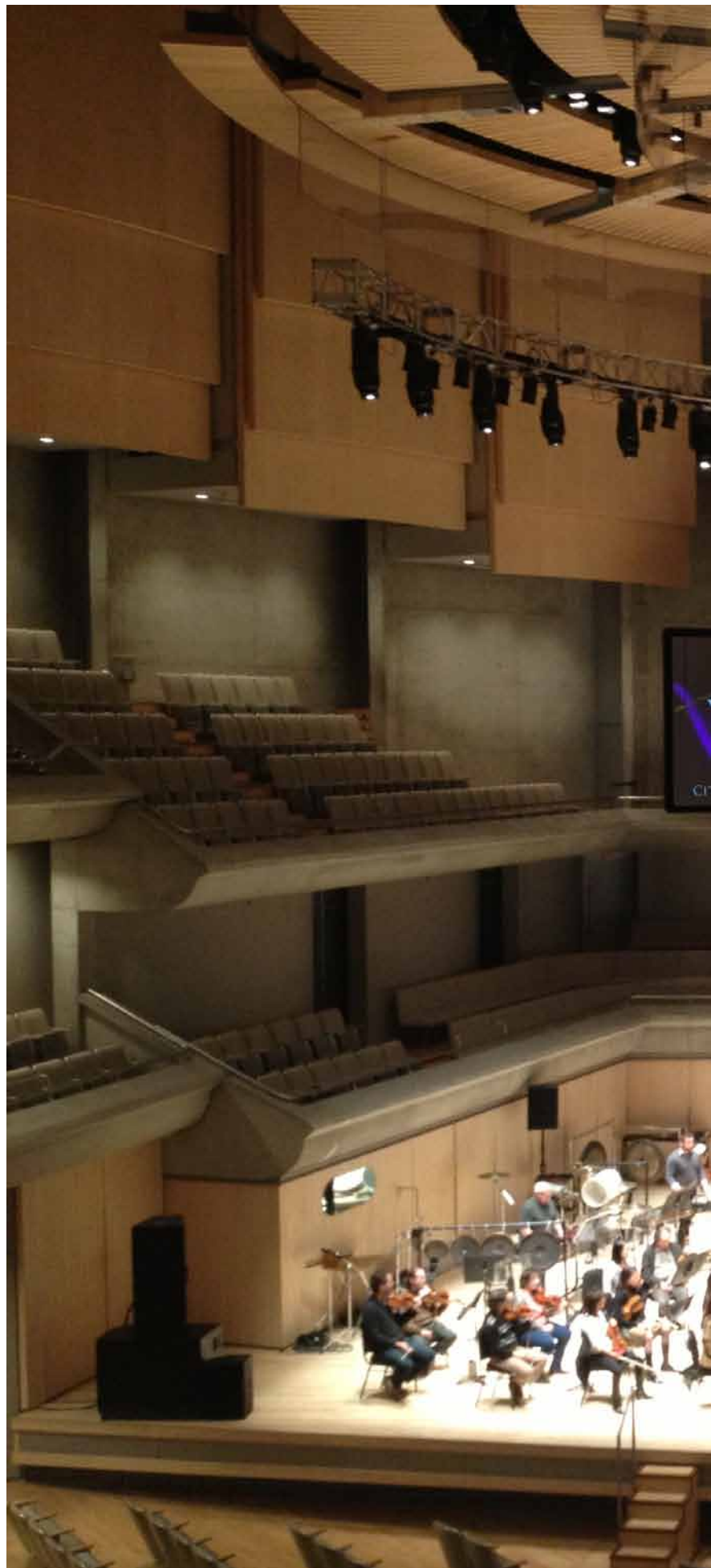
Toronto Symphony rehearsing
in Roy Thomson Hall.

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A Toronto Symphony, Tod Machover's participatory orchestral opera

BY MICHELA BARONE LUMAGA
PHOTO COURTESY OF TOD MACHOVER

'Social media and electronic communications make it possible to connect to everybody; we need to build every possible tool that we can so that there is much more fluid communication between people listening to music and people making it,' Tod Machover, interview in his MIT Media Lab office, April 2013





We came here because it is
a city full of opportunity.
— James O.
CITY VOICES



Some ATS contributors.



While disciplines such as architecture and design are exploring how to surpass ancient practices of conventional design modalities, others, like music, have already successfully opened their creation doors to the public, cross-pollinating with different artistic fields, transforming and refreshing their means through collective sharing practices.

Tod Machover, Professor of Music & Media at the MIT Media Lab and Director of its Opera of the Future group, is the composer of *A Toronto Symphony* (<http://toronto.media.mit.edu>) a crowd-sourced, collaborative orchestral opera. Machover, whose work lies at the intersection of participatory art and technology, has devoted part of his research efforts to creating tools and objects which allow untrained people to create pieces of music. He explains in a BBC interview that music has always been tied to technology, beginning with prehistoric man's discovery that banging on stones would create a more precise and piercing sound than just clapping the hands. It is therefore a logical step, he believes, to investigate methods that employ technology as a medium to shorten 'the distance between the ones that listen to music and the ones that are making it'.

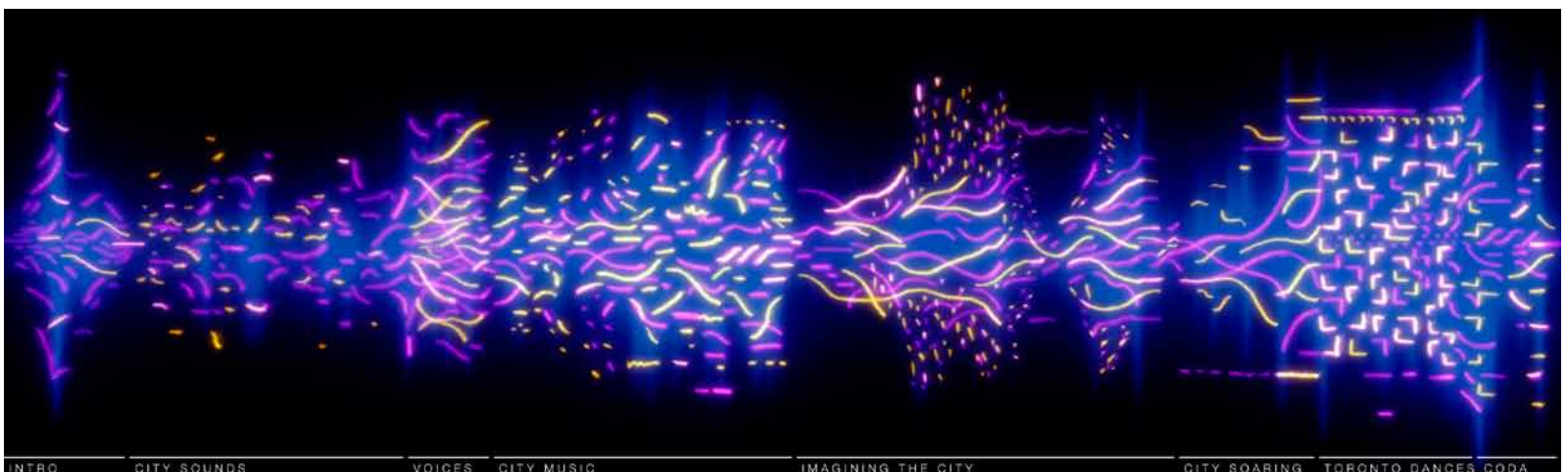
In this recent project, a piece commissioned by the Toronto Symphony Orchestra, he created, during a 15-month period, a participatory and collaborative music composition involving the citizens of Toronto. He began by requesting sounds of the city through a specifically designed blog, then ventured into the urban territory himself, recording soundscapes in distinct areas of the city. He then asked members of the Toronto Symphony Youth Orchestra to replicate and reinterpret these sounds, transforming them into acoustically playable morsels. He also recorded the voices of elementary school children and incorporated these sounds into the composition by playing them during the performance, commented on by the orchestra. *A Toronto Symphony: Concerto for Composer and City*, premiered at Toronto's Roy Thomson Hall

on March 9, 2013, is a music piece that represents a multifaceted portrait of a city painted by the citizens with natural sounds and musical notes; it values the importance of a place as generator of site-specific artwork. Peter Oundjian, Music Director of the Toronto Symphony said: 'I think this piece is perhaps the most collaborative piece of music every made.'

Michela: How did the project in Toronto start, and what were the turning points while developing it?

Tod: The project started because the Toronto Symphony Orchestra contacted me about one year and a half ago, asking me if I wanted to be the curator of their New Creations Festival. The music director and the people who run it are creative and open-minded, and orchestras in general are promising these days because they are in an urban scene, and they should represent a place to bring people together. But they are also ocean liners instead of smart cars – very large and very conservative – and they have a social and financial model which is from 100 years ago. So now they are starting to think about how they might change. When Toronto came to me, I knew we could try something interesting and we decided to make the festival around the future of the orchestra. And they asked me to make a new piece.

One of the issues that interests me is that nowadays the general public is much more willing to participate in music projects and to make songs themselves. However, social media is still primarily a marketing tool, and is not currently a very good way to connect people with very different backgrounds. So I went back to Toronto and tried a different model of participation, investigating how we could make a real, in-person discussion first, and then scale collaboration. My intention was to invite the entire city of Toronto to participate. My other goal at the beginning was to make something that would satisfy my creative instincts, so that it would feel my piece,



Visual Score: Graphic Music Representation



Toronto Elementary School kids that participated to the Opera.



Tod Machover.

but also that it would feel like everybody's piece in a balanced way.

At the very beginning, I made a picture of my imagined piece – no sound, only graphics – where shape, texture and colour gave a sense of what the piece would look like and proposed three ways of collaboration: yours, mine and ours. And then I asked the people to send me sounds. I found somebody who had a very good understanding of Toronto community groups and people to help connect me to the many diverse communities in the city. I started travelling a lot and having personal meetings while designing a mini-project for every different group of people. For example, I challenged 70 bands that were playing at an indie rock festival, inviting them to make an original composition that I would incorporate into the symphony.

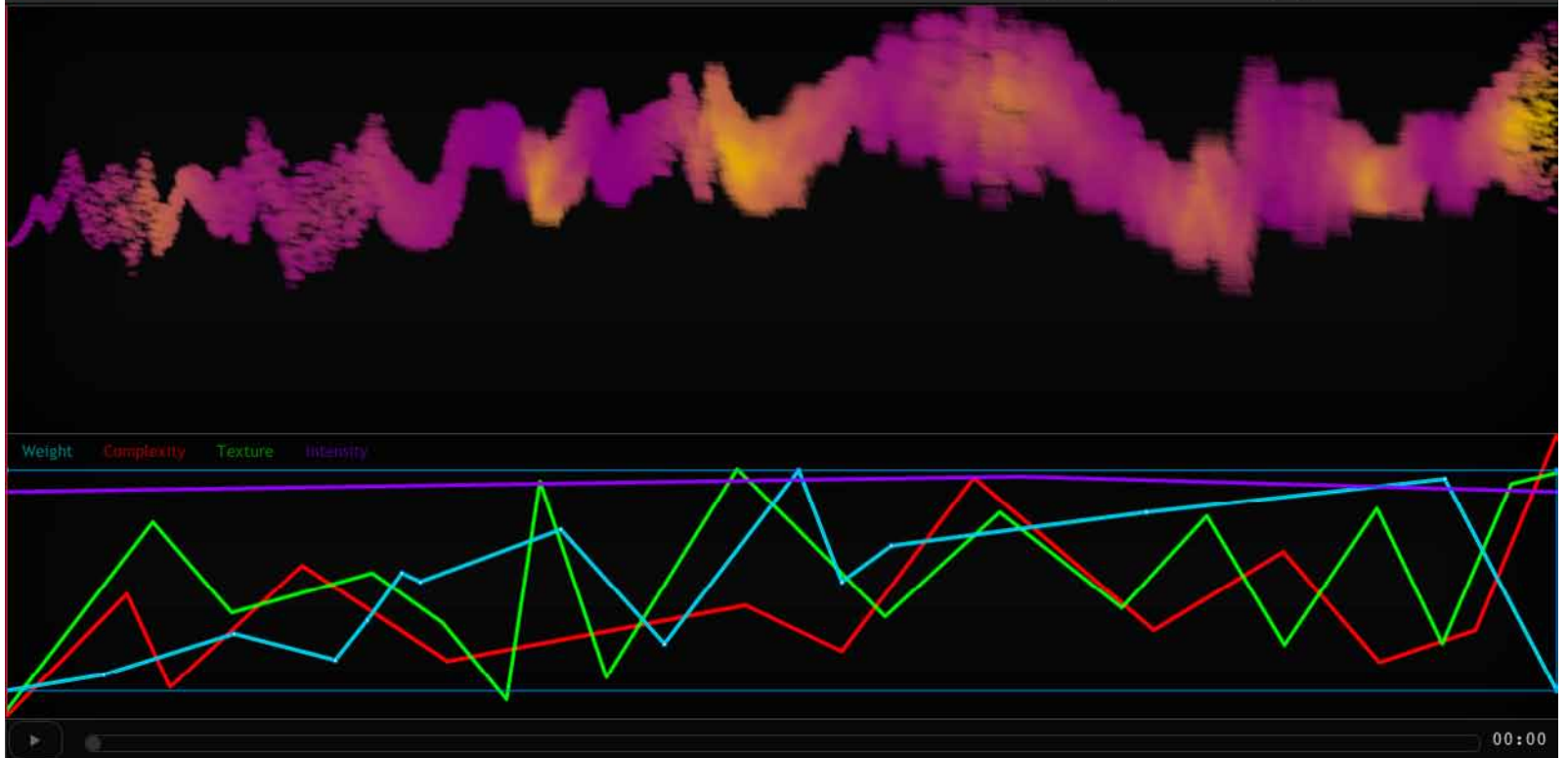
My constraints were that their composition had to be no longer than 5 seconds. So during the festival the bands performed these five seconds that were later integrated into the final piece. This is an example of how we adapted for each subgroup.

Another big thing was that we got the whole Toronto school system involved. I taught the kids and teachers Hyperscore [a computer-assisted music composition program intended to make the creation of music readily accessible to experienced musicians as well as those without any musical training] and each student worked three months on a piece that represented some aspect of Toronto to them. So there is a section of the symphony made out of kid's pieces with my glue.

In the autumn of 2013, I realized that we needed better tools to let people take

A Toronto Symphony | City Soaring

by Tod Machover



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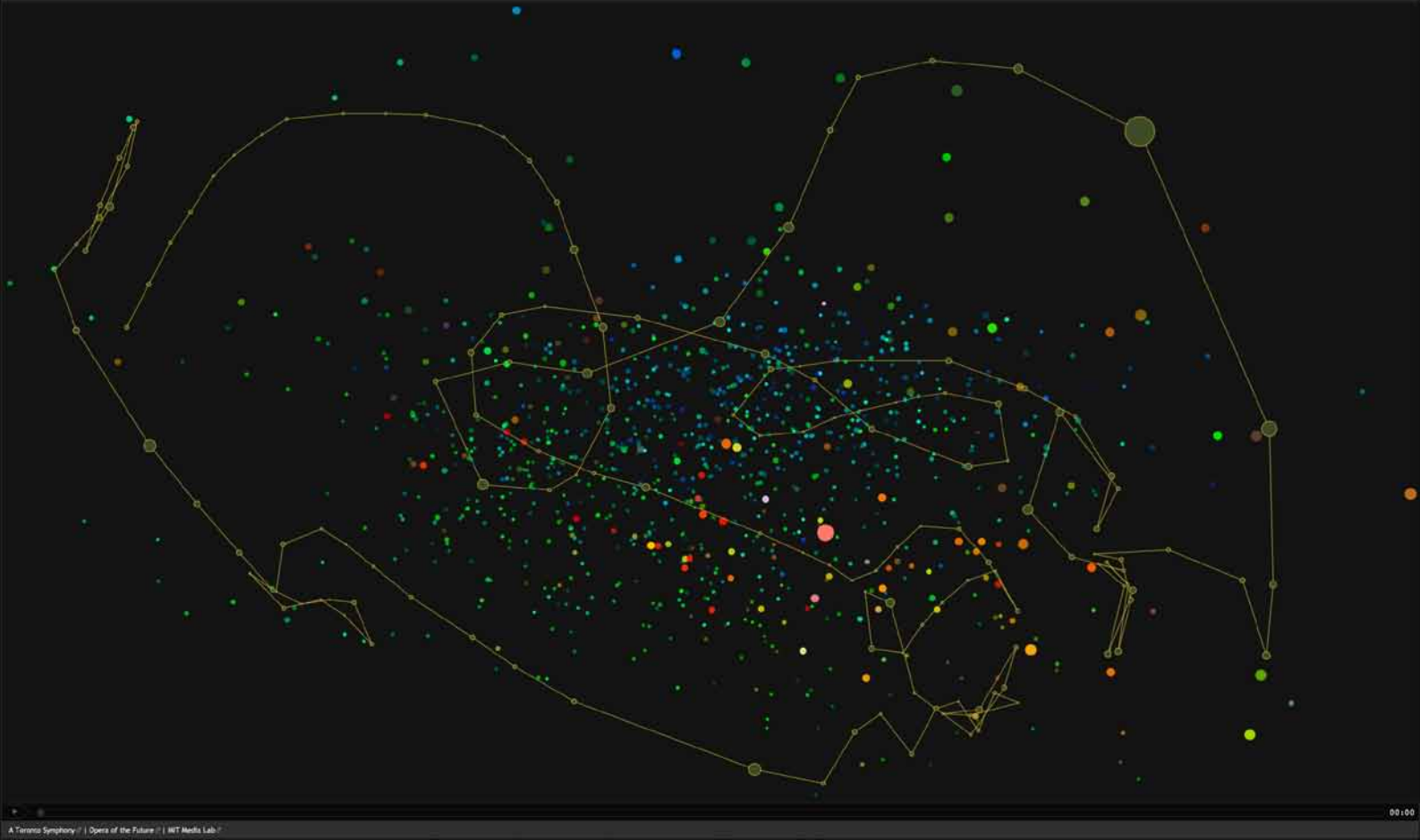
Media Score - City Soaring



Tod capturing Toronto's soundscapes.

my music as it was emerging and play with it further, so we made a series of apps that we launched in December. We developed two music app versions: *Media scores* [http://opera.media.mit.edu/projects/media_scores/] and *Constellation*, a graphic digital diagram made of multiple coloured points (each one a sound of Toronto), a very simple jagged line and virtual brushes; the user can change texture, intensity and pace, record and share his piece. Public participation happened also when I posted the then-unfinished Finale section – called *Toronto Dances* – online, inviting users to make their own complete version. That was the part of the symphony when everything get synchronized so it was a fun way for people to experiment with how all the diverse elements of the symphony could fit together.

So, with all of these techniques we engaged many different people in very different ways, and I was also able to discuss the work's shape and development with many people from different backgrounds and contexts. For the basic idea of the shape of the piece I always thought about a journey in three parts; the first part is someone like me coming into Toronto, listening and trying to understand the city. The second part is the traveller going away and imagining – or re-imagining – the city from afar. And then in the third part, everything comes together, a kind of co-existence of complexity and order that I observed in the city of Toronto itself. The final composition is about 35 minutes long – a real symphony – and is a blend of Toronto's sounds, my own music, and the multiple contributions of many collaborators from Toronto.



Graphic Visualization of Constellation
the application built for ATS

Tod with Peter Oundjian,
Music Director of the
Toronto Symphony.



Michela: When you create a new tool for making music, what are your strategies to make it easy and accessible to people? How do you reach people's hearts and keep them focused on, for instance, writing a music piece?

Tod: The environment, the task and the tool have to be something which is easy to understand. But, I think even more importantly, people have to see a goal which is important and realizable, beautiful and emotionally motivating, so they care about it. You can't ask somebody to participate in making a thirty-minute symphony as an abstract idea. The two extreme responses from the public are: I can't commit the time needed and I can't understand the boundaries (what you are really asking). And usually whenever I make a mistake, it is the latter one of those. It might be a great

idea, but they don't quite get what I am asking.

What made the big difference in *A Toronto Symphony* was the added dimension of contributing to something larger than oneself, to the city and community that everyone shared. So one thing I did was to promise that I would listen to everything and I would use as much as possible, and I made it clear to everybody where their contribution would fit in. I was very careful to show where their things were, through displaying the name, or the picture, along with the sound. I do think that we created a true sonic portrait of Toronto that felt important to everyone who helped to make it, and which sounded beautiful and worthwhile to those who listened, co-creators or not. ■