La Machine à turlute (The Turlute Machine)

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Abstract
The Machine à Turlute (Turlute Machine) is a mobile musical unit that enables the general public to learn a traditional folk singing style and collectively compose unique musical pieces.

Keynotes
Interactive, music, mobile, collective creation, heritage.

ACM Classification
H5.2. [User Interfaces]: Interaction Styles---Auditory feedback---User-centered Design; H5.5 [Sound and Music Computing]: Methodologies and techniques

General Terms
Design, Experimentation, Performance

Introduction
In the late 1920s, Marie Travers, also known as La Bolduc, was the first female singer to sing to the Québec working class, in the language of the working class. Known as the Queen of Canadian Folksingers, she made a name for herself across the country with her Turlute, a traditional folk singing style, similar to Irish liling, that sings out instrumental partitions with evocative phonemes [1]. Tam ta da dee ta tam.

In 2011, we were commissioned by Lusio Films to develop a Turlute machine for the project Les Enfants de la Bolduc (“Children of La Bolduc”) that invited known Québec artists to rediscover the musical heritage of La Bolduc. Our Turlute machine would bring their music to the general public, traveling around the province as La Bolduc once did.

The Machine à Turlute is a custom designed trailer with a musical disc-based interface that plays sounds of Turlute composed and sang by different contemporary artists. This machine spreads the cheerful sounds of the Turlute and teaches the public about how these are created, inviting them to play around, create their own Turlute, and leave with one in mind.

As a contemporary interpretation of the spirit of this folk singer, the Machine also enables participants to rediscover a part of their cultural heritage while exploring how it can still be relevant today.
A singing machine
At the heart of the machine are human voices by three artists from the Enfants de la Bolduc. Their singing voices are triggered by a disc interface that allows to ‘spin’ to trigger the different phonemes and ‘play’ a Turlute. We deconstructed each artist piece in three partitions. Each partition was assigned to a disc, people spinning different discs at different times compose their own Turlute.

The written phonemes are displayed around the discs and a corresponding LED light is activated when a phoneme is triggered, enabling users to read the music as they play.

Interface for collective music playing
A important challenge was to maintain harmonious mixing of the sounds. We therefore designed two playback modes:

1. Free mode, for more advanced players: This mode triggers sounds in real-time, following the exact user’s spinning of the disk.

2. Grid mode, for the general public: This mode triggers sounds by following a tight base rhythm.

Technical description
Each disk interface includes a magnetic sensor that detects the exact position of the disk at any given time. The sensors are connected to a central computer running Max/MPS that manages the sound composition and outputs. Sensor data and LED control are handled by a central micro-controller.

Aesthetics
The look of the machine was a key element to attract passers-by. We hoped to create an interface that referenced both the heritage and the contemporary nature of the project. But most importantly, the aesthetics needed to be accessible to all and clearly indicate how to play it.

The result
A film crew toured our Turlute machine all over the province and filmed people using it in different regions – bringing La Bolduc’s music and heritage to the streets and the people.

Acknowledgements
It took an elaborate team to make this project. A preliminary interactive scenario was created with designers Amélie Bilodeau, Émilie Grenier and Yolène Leroux. Then we brought on board David Drury, sound designer and programmer and Eva Schindling, interaction designer and technical director. Industrial designers À Propos (Eugénie Manseau and Philippe Carreau) designed the physical object. The project was produced by Lusio Films (Nicolas Fonseca and Marie-Dominique Michaud) and the Enfants de la Bolduc was directed by Jean-Christophe Yakono (Yako).

References