

Master's Thesis for Jeppe Hjersing Knudsen & Martin Geertsen
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Development Of The TonePrint Community: A case study in user involvement

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Contents

1	Introduction	5
1.1	The TonePrint Concept	5
1.1.1	The TonePrint Software	6
2	Heuristic Evaluation	9
2.1	Heuristic Evaluation Results	9
3	The Design process of TC Electronic	13
3.1	Interview with TC	13

Chapter 1

Introduction

The following master’s thesis takes its starting point in the TonePrint concept from TC Electronic (from here on referred to as *TC*). Its reveal in 2011 opened a new playground for musicians and tone tweakers, making effect editing possible from the users smartphone. Until this point, TC was already a worldwide known manufacturer of effect pedals for guitarists, originally formed in the early 1970’s by Kim and John Rishøj in Aarhus, Denmark. With this as the baseline for the thesis, the focus will be on the future for this concept, starting with a general description of effect units and the capabilities of TonePrints.

1.1 The TonePrint Concept

Effect pedals in general are well known units for guitarists and bassists alike, spanning multiple music genres. The pedal works by taking the input signal from the guitar and changing it to the tweaking by the users. Depending on the effect type, and when playing, the user activates these changes by a single button on the pedal. An example of a simple guitar effect pedal is displayed on Figure 1.1, where the adjustable parameters on it consists of *Dwell*, *Mix*, and *Tone*. Each of these are accessed and tweaked with individual knobs on the unit, which gives the user a limited range of ways to change the sound.

With this limitation as a motivation, TC created the TonePrint concept, enabling users to tweak the sound of effects beyond the parameters on the pedals. Using the TonePrint application, the users have a vast selection of custom presets with further parameters available for tweaking. These presets are what the term *TonePrint* covers and they are either created in collaboration with professional musicians or by the common user. In order to distinguish these from each other, they are referred to as *Artist TonePrints* and *User TonePrints* respectively. After selecting one for the effect pedal in question, the user can make any desired tweaking or transfer it directly to the pedal with the option of altering it even more on the physical knobs (Andersen 2012). TC has collaborated with multiple guitarists and bassists, creating TonePrints for effect pedals used by the artists themselves. After the creators are satisfied with their TonePrints,

they are uploaded to the TonePrint library in the application where any users of the same effect pedal can download the TonePrint and as such match the sound of their favourite artist. For User TonePrints the overall concept is the same. They differ in the fact that the creator isn't a famous guitarist, but the TonePrint is still made using the application and can be transferred directly to its effect pedal. However, when it comes to sharing these User TonePrint with friends and other aspiring guitarist, a platform for this purpose doesn't exist yet.



Figure 1.1: This figure shows a Drip spring reverb effect pedal by TC Electronics [https://www.tcelectronic.com/Categories/Tcelectronic/Guitar/Stompboxes/DRIP-SPRING-REVERB/p/POCQ2#googtrans\(en|en\)](https://www.tcelectronic.com/Categories/Tcelectronic/Guitar/Stompboxes/DRIP-SPRING-REVERB/p/POCQ2#googtrans(en|en)).

1.1.1 The TonePrint Software

As previously stated, the exploring of TonePrints start with the TonePrint application available for smartphones and tablets. However, the software is also available for PC and MAC, and the reason for this distinction lies in the difference of how a TonePrint is transferred to its respective pedal. For PC and MAC the user is required to use a cable from the computer to the pedal, but through the tablet and smartphone application, the user also have the option of simply beaming it directly to the pedal. whatever the platform, however, when opening the software the user is introduced to a list selection of different effect pedals, each holding a vast number of TonePrints created by famous guitarists. After selecting an effect pedal from this list, the user is then presented a new list selection of the many guitarist who have created TonePrints for this pedal. When selecting one of the guitarists, and depending on whether the guitarist have created more TonePrints for the same pedal, the user is then presented a bigger view of this specific TonePrint with a description of it and its creator. An example of this is displayed on Figure 1.2. Depending on the users' motivation when opening the application first time, they can also choose to browse by artist instead of pedal, if their starting point is to find out what it takes to sound like their favourite artist.

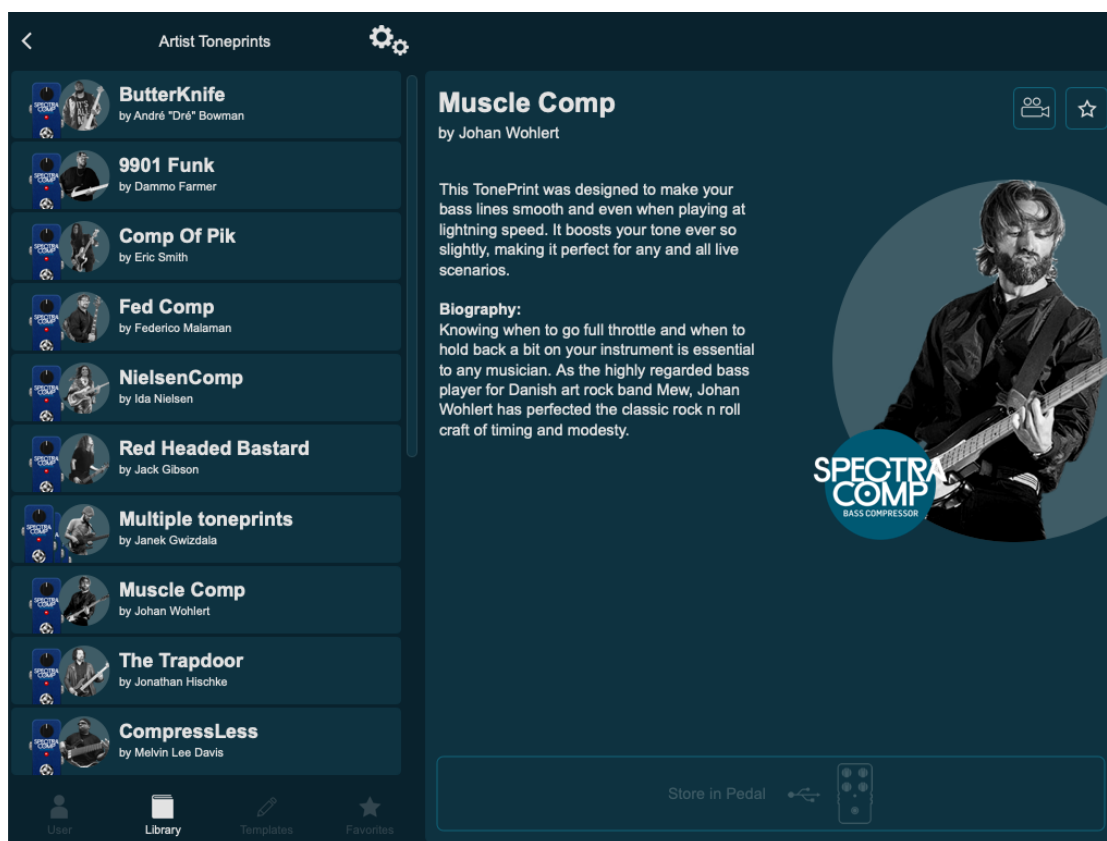


Figure 1.2: The view in the TonePrint application after selecting an effect pedal and a TonePrint. This example displays a TonePrint created by Johan Wohler of the danish rock band *Mew*.

Chapter 2

Heuristic Evaluation

The following chapter....

2.1 Heuristic Evaluation Results

The results of the heuristic evaluation are presented in categories of what usability heuristic they may violate....

Visibility of system status

- When browsing through the available TonePrints for artists, some of them may have created the same TonePrint settings for multiple pedals. Clicking between these doesn't provide any clear feedback to which is selected however, as the description of the TonePrint is the same whichever pedal it is set for.
- There is a lack of indication to which instrument is selected, as this selection happens in settings and not in the list itself. If either *guitar* or *bass* is selected under the instrument filter, and not *all*, the message in the list "*all TonePrints by...*" is misleading, as the user is only going to find TonePrints for one instruments.
- When pressing *user* on the computer application there are no indications of what to do next. The user is just presented a blank column with nothing in it.
- When selecting the **Helix Phaser** with the *guitar* filter active on the computer app, nothing happens. When trying this on the Iphone app, it opens one TonePrint, and when opening it on an android unit, the app crashes.
- When pressing the video icon on the android and computer app, it isn't clear that the unit will open youtube in a web browser compared to the Iphone app.

Match between systems and the real world

- The sliders for the various parameters are all presented as circular sliders, but interaction with them are done by pressing the center of it and swiping up or down. As such there is a risk of grabbing the entire canvas and not the parameter in question.
- It appears to still be possible to select bass TonePrints with the *guitar* filter active.

User control and freedom

- Nothing here...

Consistency and standards

- Some artists have published the same TonePrint for multiple pedals and when switching between these, the text description is the same. However, in some cases there is a noticeable difference when doing these switch, as some of the descriptions has minor spelling or typeset errors, even though they should be identical.
- When opening a video description of a TonePrint with its creator on the smart-phone app, it is presented in a new window. When opening one in the computer app, it passes you on to the given video on youtube.
- When browsing TonePrints, there are different buttons in the top right corner of the description page, depending on on the TonePrint.
- When watching a video description of a TonePrint on the Iphone app and the user at some point wants to return to the list of TonePrints or artists, it demands two different interactions. First, the user must swipe down in order to return to the TonePrint description, before either swiping right or pressing *back* to get back to the list view.
- When choosing the **SpectraComp Bass Compressor** with the *guitar* filter on, the user doesn't get the same menu as when choosing other pedals. This is probably due to it being a bass effect.
- When creating a favourites list, the TonePrints are sorted by pedal name, even if the user selects *sort by artist*.
- When opening the app on an android unit, the user gets informed that he needs a midi connection. This message doesn't appear on the desktop version, even though the same goes for that.
- The user has a search functionality available on the android system but not on

either the desktop or Iphone version.

Error prevention

- The typical confirmation dialogue of either ✓ or ✗ is presented to the users with these icons inside the button on the Iphone app. As such it isn't clear whether the user selects an action when it is visible, or if this visibility means that it is already selected.
- When the user is beaming a TonePrint to the pedal, he is given the instruction: *If your pedal flashed like this beaming was a succes*. In order to follow this instruction the user would have to focus on the pedal, and by doing this he wouldn't have seen this instruction in the first place. As such, the user has to focus on two things at once.
- The user can assign different parameters to the same physical button on the pedal, allowing for live editing of the TonePrint. However, the pedal comes with a print above the knob on the pedal itself, which can't change. As such, the user can potentially edit a parameter, even though the knob says something different.

Recognition rather than recall

- When switching between *browse by product* and *browse by artist*, this has to be done under settings, and the same goes for switching between type of instrument. Instead of having this filtering action visible with the list, the user must remember to check this in the settings menu.

Flexibility and efficiency of use

- In general there are many options for customising, which could help make an experienced user interact faster.
- The search functionality on the android app only allows for searching in the open menu, making it almost redundant. The user still needs to go to the right menu before searching for specifics, making scrolling a faster way of finding the right TonePrint.

Aesthetic and minimalist design

- It's limited to what extend the size of the canvas can be expanded on the computer app. If it is made full-screen it will no long match the size of the window and take all the space. Instead, the far right of the window will just be a blank column of nothing.

- When opening the computer application, until something is chosen, the screen will primarily be just blank.

Help users recognise, diagnose, and recover from errors

- Nothing here...

Help and documentation

- When choosing *Editor Help*, the user is sent to the main TonePrint webpage.

Chapter 3

The Design process of TC Electronic

3.1 Interview with TC

- Da i udviklede konceptet for TonePrint editor appen, hvordan besluttede i hvilke funktioner der skulle være med og hvordan de skulle designes?
- Hvordan har jeres viden angående jeres brugere påvirket/formet udviklingen af TonePrint editoren? Og hvor har i den viden fra?
- Gjorde i noget for at målrette TonePrint editoren mod nogle bestemte brugere, og hvordan gjorde i det i såfald?
- Selvom TonePrint editoren er et ret unikt produkt har i så draget inspiration fra andre interne og eksterne produkter/systemer og i så fald hvordan?
- Hvordan besluttede i jer for informationsstrukturen i TonePrint editoren både set i forhold til menu strukturen og de forskellige måder de kan kategoriseres?
- Hvad ligger til grunde for jeres valg om at have små differenceringer mellem Editor på computer, Iphone og android? Eksempelvis informationen om ikke tilsluttet pedal, søge funktionen, video visning og TonePrint information samt beaming?
- Til hvilken grad bruger i informationer i får gennem TonePrint junkies facebook siden eller music tribe communityet?
- Meget har ændret sig fra de gamle editor og apps, til den nuværende editor app. Hvorfor ændrede i både den grafiske identitet og flere funktionaliteter?
- Hvad er den typiske feedback i får vedrørende TonePrint editoren og hvordan bruger i denne feedback?
- Hvilke positive og negative effekter har jeres SCRUM arbejdsmetode haft på udviklingen af TonePrint editoren?
- Hvilke teknologiske begrænsninger har i haft under udviklingen af TonePrint editoren og hvordan har i kompenseret for disse?
- Hvordan opstillede i kravene for TonePrint editor appen både konceptuelt, design, succes mæssigt? Og hvordan måler i om kravene er imødekommet?

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