

VisiChord Chord Visualizer

Use Cases

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CAC: Clear all chords

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To clear all chords from the chord display.
- **Description:** User decides he wants the staff cleared of chords. User clicks on the clear button.
- **Pre-conditions:** None.
- **Post-conditions:** No chords or chord titles are displayed, however, the chord set title is displayed.

CCB: Change clef breakpoint

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To change the breakpoint for assigning notes to ledger lines associated with the bass and treble clefs.
- **Description:** User tells program to change the breakpoint and selects the desired note to break on.
- **Pre-conditions:** None.
- **Post-conditions:** Any notes added with the MIDI key board, tty key-board, or piano display will be added to the staff relative to the breakpoint.

CSC: Change selection color

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To change the highlight color of the current chord.
- **Description:** User gives the change selection color command. A dialog box is presented. The user chooses the new color and affirms the selection. The new color is set as the selection color.
- **Pre-conditions:** None.
- **Post-conditions:** The new color is set as the selection color.

CLS: Clear slot

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To remove all notes from a chord.
- **Description:** The User gives a clear command, either with the mouse or tty keyboard. All notes are removed from the currently selected slot.
- **Pre-Conditions:** None.
- **Post-Conditions:** The currently selected slot contains no notes. A copy of the slot's pre-clearing chord exists in the clipboard.

COC: Copy Chord

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To create a copy of the chord in the clipboard.
- **Description:** The User gives a copy command, either with the mouse or tty keyboard. A copy of the chord is placed into the clipboard without changing the chord.
- **Pre-Conditions:** None.
- **Post-Conditions:** The currently selected chord is now present in the clipboard.

DLS: Delete slot

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To remove a chord and its slot from the staff.
- **Description:** The User gives a delete command, either with the mouse or the tty keyboard. The currently selected slot is removed from the staff. The slots to the right slide left to fill the gap, and the slot to the immediate right becomes selected.
- **Pre-Conditions:** None.
- **Post-Conditions:** A copy of the slot exists in the undo buffer. A copy of the chord contained in the slot exists in the clipboard. The slot itself does not exist in the staff. The slot to the immediate right is the currently selected slot.

ECP: Edit chord on piano display

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To make changes to a chord.
- **Description:** The User clicks on a key of the piano display. If that key is not currently present in chord, it is added to the chord and displayed on the staff. If that key is present, it is removed from the chord and from the staff.
- **Pre-Conditions:** Chord exists.
- **Post-Conditions:** None.

ECS: Edit chord on staff

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To make changes to a chord.
- **Description:** The User clicks on a section of the staff containing the currently selected chord. If the note clicked on is not currently present in the chord, it is added to the chord and displayed on the piano display. If it is present, the note is removed from the chord and from the piano.
- **Options:** When inserting a note, the User may hold down a modifier key to make the note sharp, and a different modifier key to make the note flat.

- **Pre-Conditions:** Chord exists.
- **Post-Conditions:** None.

ECT: Edit chord title

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To edit a chord's title.
- **Description:** The Users clicks on the chord's title space and uses the keyboard to input a title. The chord's title becomes the one input.
- **Pre-Conditions:** Chord exists but may be blank.
- **Post-Conditions:** Chord has title.

ECTTY: Edit chord using tty keyboard

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To edit a chord using the tty keyboard.
- **Description:** The User enters the notes in the text entry box using standard designation. The User may edit the text as normal. When the 'Enter' key is pressed, the notes are added to the current chord and displayed on both the staff and piano display. A new blank chord is then inserted after the current chord and all chords to the right are shifted. The new chord becomes the current chord.
- **Pre-conditions:** The text entry box has the focus.
- **Post-conditions:** A new blank chord exists and is selected.

ET: Edit title

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To edit the chord set's title.
- **Description:** The User clicks on the title of the chord set and uses the keyboard to input the new title. The title of the chord becomes one input.
- **Pre-Conditions:** None.
- **Post-Conditions:** Chord set has title.

ICM: Insert chord via mouse

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To insert a new chord using the mouse.
- **Description:** The User clicks the 'Insert Chord' button with the mouse. A new blank chord is inserted after the currently selected chord and all chords to the right are shifted. The new chord becomes the current chord.
- **Pre-conditions:** None.
- **Post-conditions:** A new blank chord exists and is selected.

ICTTY: Insert chord via tty keyboard

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To insert a new chord using the tty keyboard.
- **Description:** The User presses a pre-defined key combination on the tty keyboard. A new blank chord is inserted after the currently selected chord and all chords to the right are shifted. The new chord becomes the current chord.
- **Pre-conditions:** None.
- **Post-conditions:** A new blank chord exists and is selected.

ICB: Insert chord at beginning

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To insert a chord at the beginning of the chord set.
- **Description:** The user clicks on the staff clef picture. If the first chord is displayed, a new chord is inserted at the beginning and becomes the current chord. Otherwise, the chord directly before the first chord displayed onscreen becomes the current chord.
- **Pre-conditions:** None.
- **Post-conditions:** None.

ICE: Insert chord at end

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To insert a chord at the end of the chord set.
- **Description:** The user clicks the end staff picture. If the last chord is displayed, a new chord is inserted at the end and becomes the current chord. Otherwise, the chord directly after the last chord displayed becomes the current chord.
- **Pre-condition:** None.
- **Post-condition:** None.

LF: Load file

- **Actors:** User, file system.
- **Initiator:** User.
- **Goal:** To load chords stored in a file into VisiChord.
- **Description:** User selects that they want to load chords from a file. User selects file to load chords from from a list of files. Chords are loaded and displayed in VisiChord.
- **Pre-conditions:** None.
- **Post-conditions:** The set of chords stored in the file is loaded and displayed in VisiChord.

PLC: Play chord

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To play the current chord.
- **Description:** User clicks the play button. Chord plays.
- **Pre-Conditions:** Chord is selected.
- **Post-Conditions:** None.

PSC: Paste chord

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To replace an existing chord with another.
- **Description:** The User gives a paste command, either with the mouse or the tty keyboard. The chord in the clipboard replaces the one in the currently selected slot.
- **Pre-Conditions:** A chord exists in the clipboard.
- **Post-Conditions:** The chord in the currently selected slot is identical to the one in the clipboard.

SC: Select chord

- **Actors:** User.
- **Initiator:** User.
- **Goal:** Have a specific chord become the current chord.
- **Description:** User clicks on slot that he wants to select. The chord is now selected.
- **Pre-conditions:** Slot exists.
- **Post-conditions:** The slot is now the current slot, or added and selected if the beginning and end slot were clicked.
- **Options:** If play option is on, the chord will play.
- **Exception:** If the User clicks on the beginning or end slot and there is already a blank space next to that slot, that blank space will become the current slot.

SCF: Save chords to file

- **Actors:** User, file system.
- **Initiator:** User.
- **Goal:** To save all chords currently input into a file that can be loaded for later use.
- **Description:** User decides he wants to save the chords he has input. User clicks on the save button. A standard saving dialog pops up which allows the User to select a location and name for the saved file. User clicks 'OK' or clicks 'Cancel' and the operation is aborted.

- **Pre-conditions:** The program has at least one chord or an overall title entered.
- **Post-conditions:** None.

SRL: Scroll

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To move the current slot one slot to the left or right.
- **Description:** User moves mouse to one of the two scroll arrows. User pushes button. The next chord is selected.
- **Options:** If the User pushes the arrow pointing to the right, the current slot moves to the right. If the User pushes the arrow pointing to the left, the current slot moves to the left. If the sound is on, the newly selected chord is played.
- **Pre-conditions:** There is a slot to the left or right and the current slot
- **Post-condition:** The proper slot is selected.
- **Exceptions:** The current slot is not an empty beginning slot (if scrolling to the left) or end slot (if scrolling to the right).

SRB: Scroll to beginning

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To go to the first chord in the set.
- **Description:** User gives the scroll to beginning command. The first chord is selected as the current chord.
- **Pre-conditions:** None.
- **Post-conditions:** The first chord is selected and displayed.

SRE: Scroll to end

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To go to the last chord in the set.

- **Description:** User gives the scroll to end command. The last chord is selected as the current chord.
- **Pre-conditions:** None.
- **Post-conditions:** The last chord is selected and displayed.

TC: Transpose chord

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To transpose a chord an arbitrary number of half-steps using the mouse.
- **Description:** User clicks a transpose arrow. The chord is transposed up or down one half step.
- **Options:** If the sound is on, the new chord is played.
- **Pre-conditions:** Chord exists and contains at least one note.
- **Post-conditions:** The notes in the chord are now transposed to their new location.

UND: Undelete chord

- **Actors:** User.
- **Initiator:** User.
- **Goal:** To put back a slot and chord that were previously removed.
- **Description:** The User gives an undelete command, either with the mouse or the tty keyboard. The first slot in the undo buffer is inserted into its original position. The reinserted slot becomes the currently selected slot.
- **Pre-Conditions:** A slot exists in the undo buffer.
- **Post-Conditions:** The slot exists in the staff. The slot does not exist in the undo buffer. The slot becomes the currently selected slot.