Automatic Scoring-up Tool for Mensural Music

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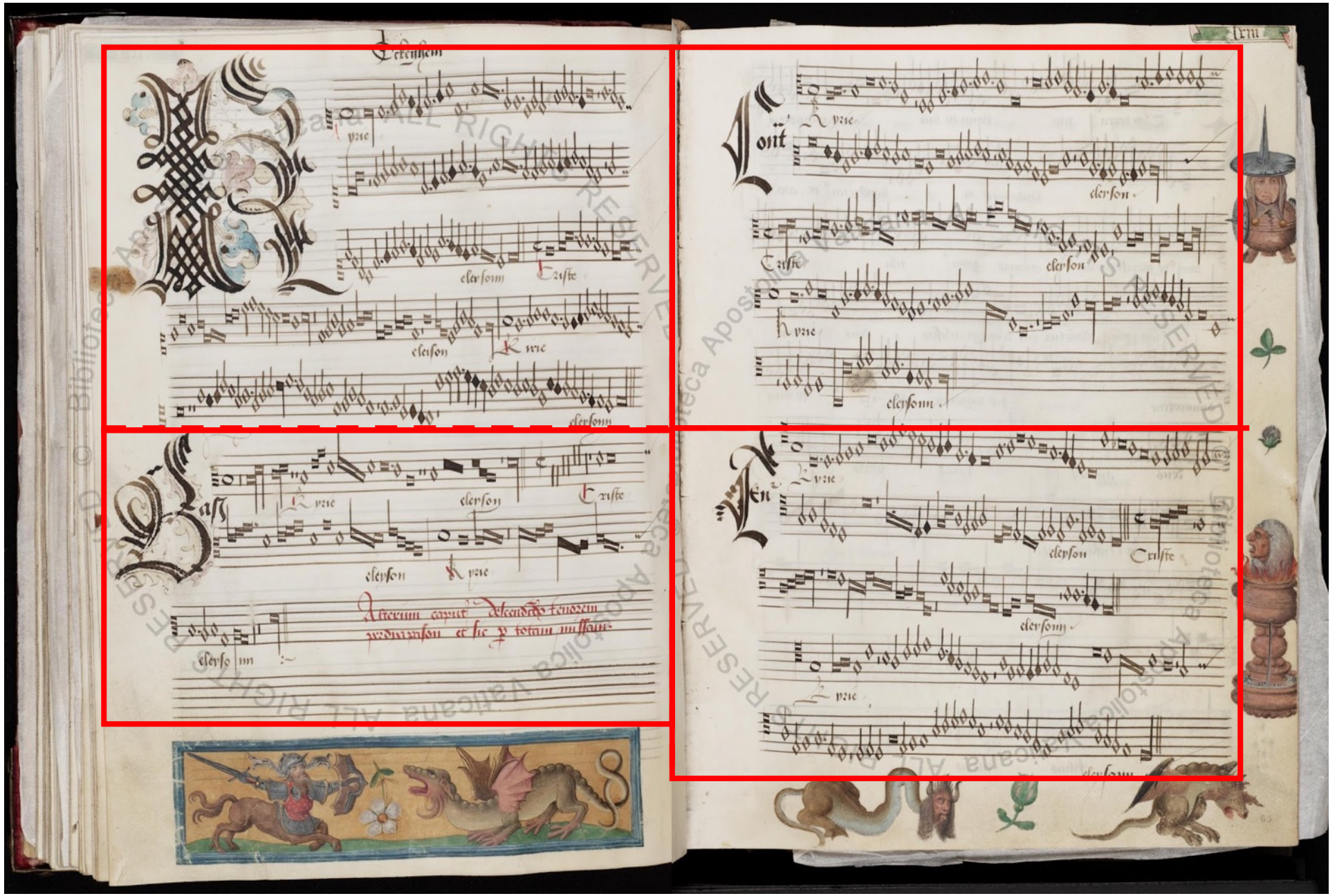


Motivation

- The purpose of this project is to take all the notes from each of the parts (i.e., voices) of a mensural piece and line them up automatically, in order to present the piece in score format, a process that we refer to as “scoring up”
- To facilitate counterpoint studies (this is, the study of the relation between the voices)

Scoring-up tool

- The process of scoring up involves the correct alignment of the notes from the different voices
- But, in order to line up the notes, we need to know the duration of each of the notes
- This is particularly challenging when dealing with mensural notation

The duration of the individual note symbols in mensural notation is not absolute, but rather context-dependent

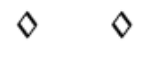
Mensural Notation

- There is a clear hierarchy in the note duration

- But, the actual value of these notes is ambiguous

longest

shortest

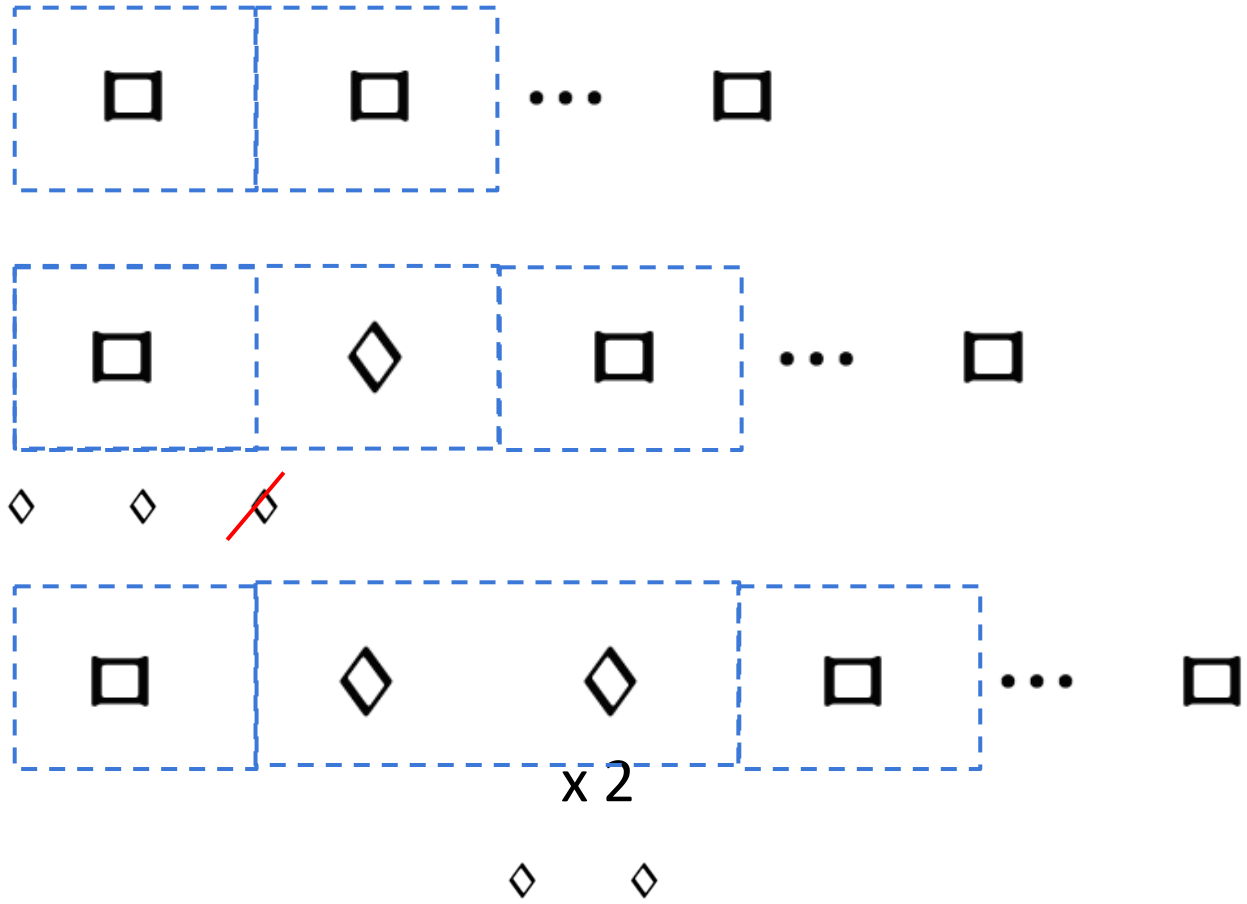
Notes		Values	
Name	Shape	Perfect	Imperfect
Maxima			
Long			
Breve			
Semibreve			

- It can either be triple (i.e., “perfect”) or duple (i.e., “imperfect”)

- The value is determined by two factors:
  - Mensuration
  - Context

Examples of Context Changing the Note's Value

Mensuration: Breve = 3 → Breves are perfect by default



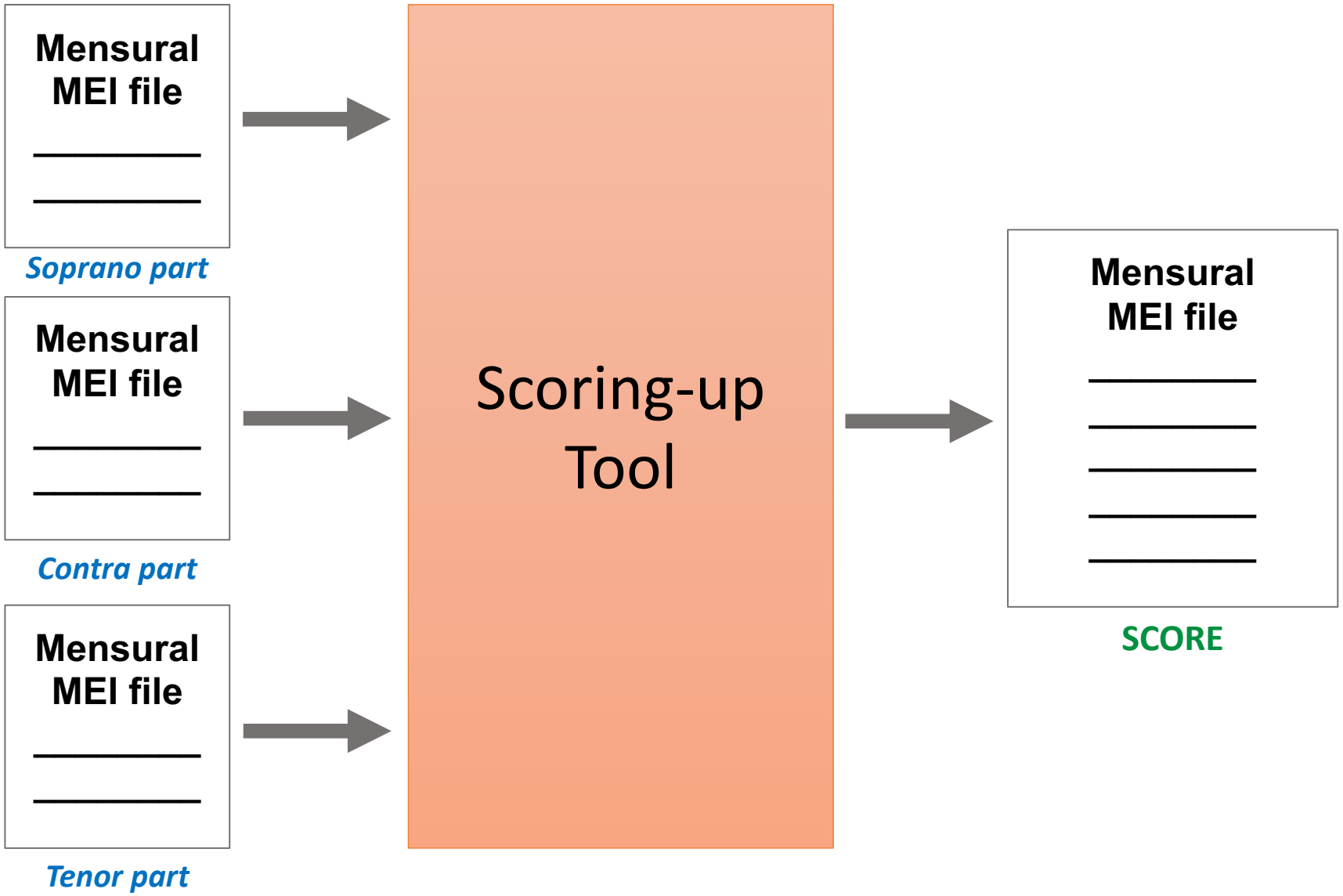
Principles of Imperfection and Alteration

Imperfection
Perfect → Imperfect

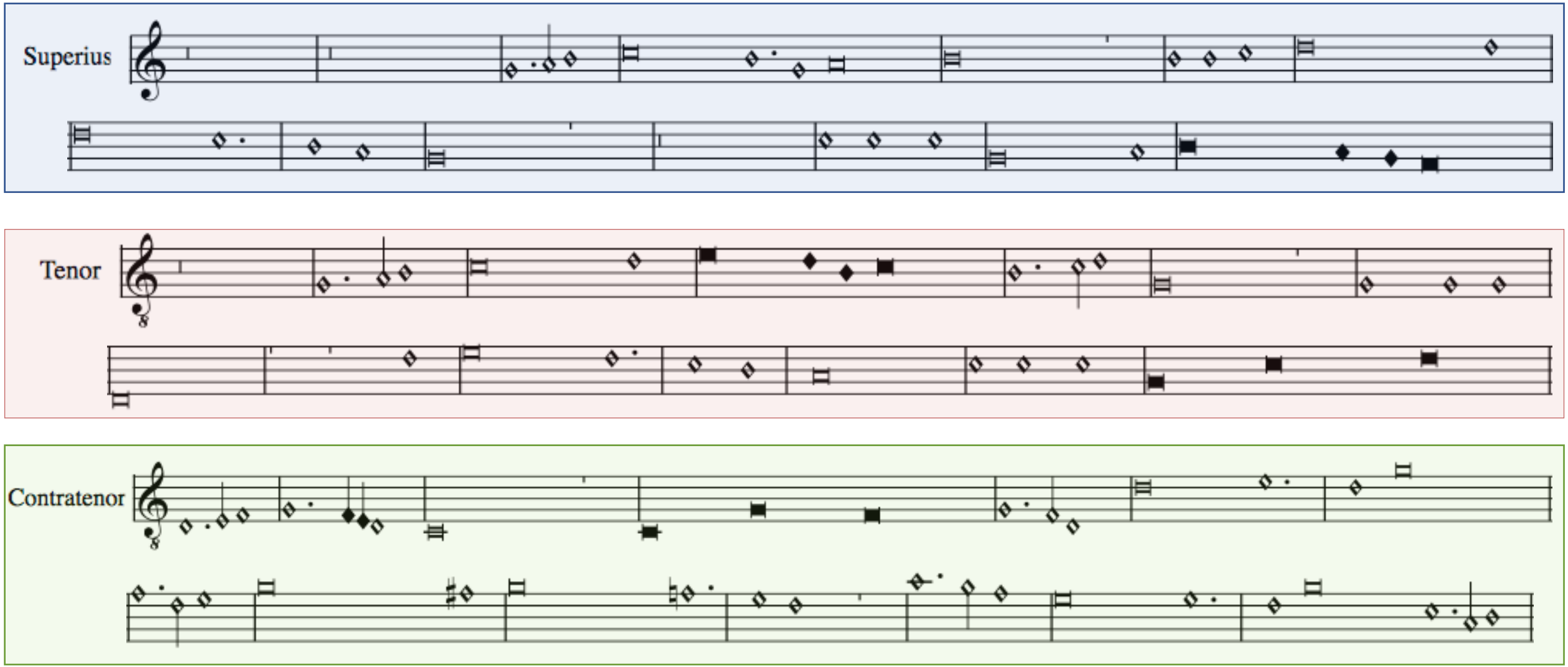
Alteration

Scoring-up tool

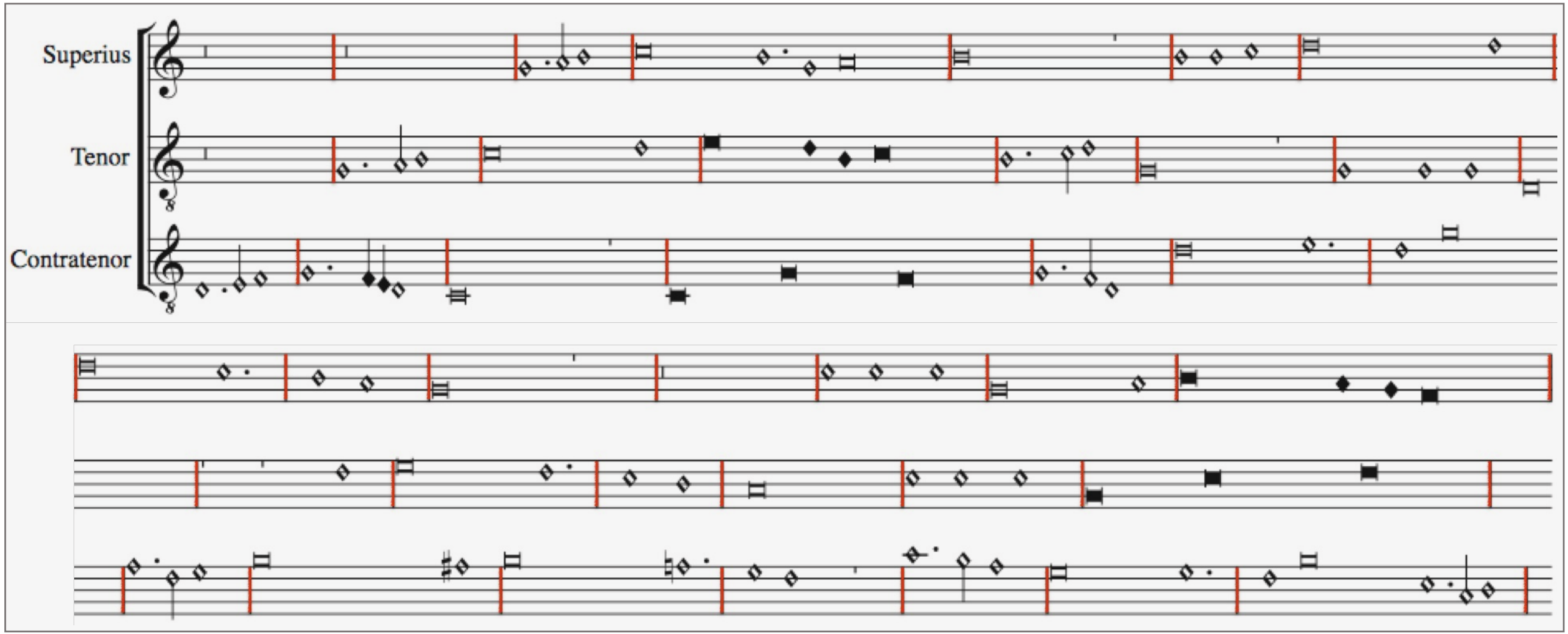
- Deals with the context-dependent nature of mensural notation
  - By implementing the “principles of imperfection and alteration”
- Deals with other non-context related features:
  - Dots of Augmentation → **When?** Distinguish between “dots of division” and “dots of augmentation”
  - Coloration → **When coloration has an effect on the note value?**


Mensural MEI file
Soprano part
Mensural MEI file
Contra part
Mensural MEI file
Tenor part
Scoring-up Tool
Mensural MEI file
SCORE

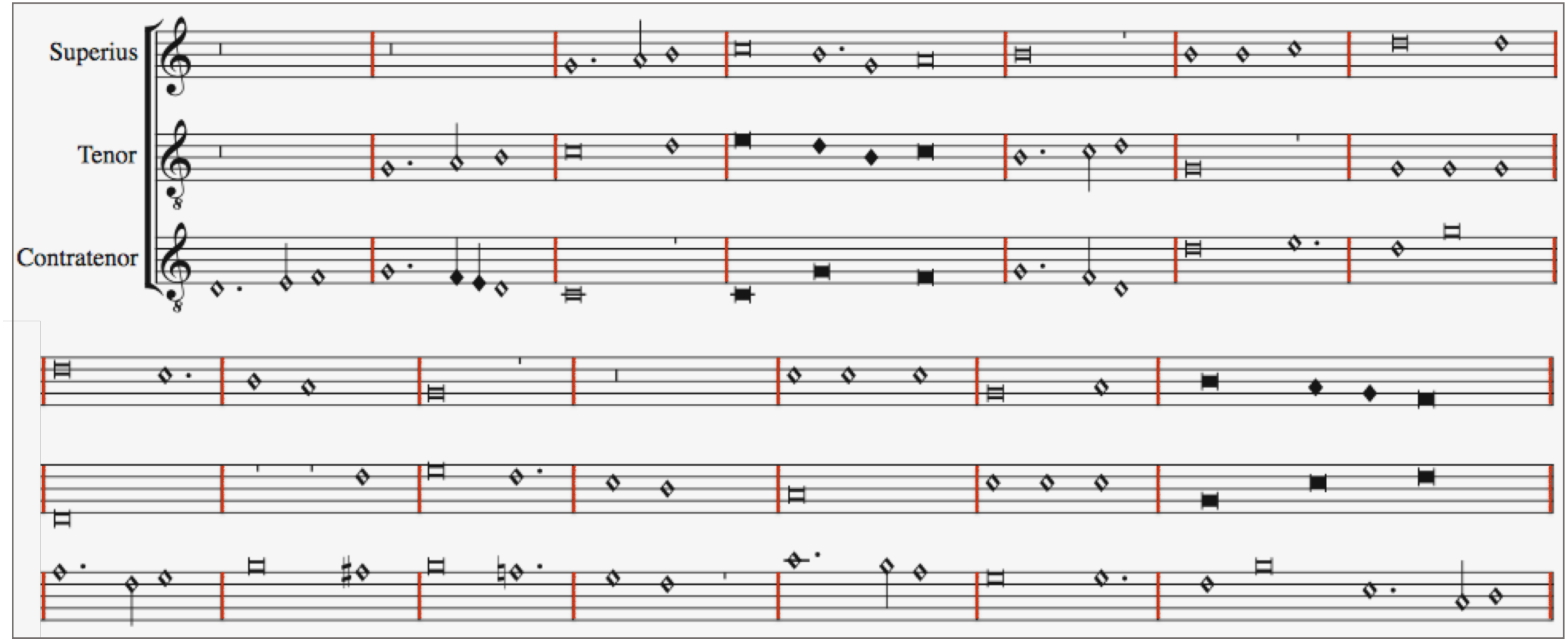
Example: Parts



Without using the Scoring-up Tool



With the Scoring-up Tool



Conclusions

- The scoring-up tool presents the piece in score format
- Facilitates visualizing the vertical sonorities and studying the relation between the voices of a piece, which was difficult given the separate-parts layout of the original sources
- Preserves the original note values

Thank you!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