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(54) **SYSTEM AND METHODS FOR AUTOMATICALLY GENERATING A MUSICAL COMPOSITION HAVING AUDIBLY CORRECT FORM**

(57) A generative composition system reduces existing musical artefacts to constituent elements termed "Form Atoms". These Form Atoms may each be of varying length and have musical properties and associations that link together through Markov chains. To provide myriad new composition, a set of heuristics ensures that musical textures between concatenated musical sections follow a supplied and defined briefing narrative for the new composition whilst contiguous concatenated Form Atoms are also automatically selected to see that similarities in respective and identified attributes of musical textures for those musical sections are maintained to support maintenance of musical form. Independent aspects of the disclosure further ensure that, within the composition work, such as a media product or a real-time audio stream, chord spacing determination and control are practiced to maintain musical sense in the new composition. Further, a structuring of primitive heuristics operates to maintain pitch and permit key transformation. The system and its functionality provides signal analysis and music generation through allowing emotional connotations to be specified and reproduced from cross-referenced Form-Atoms.

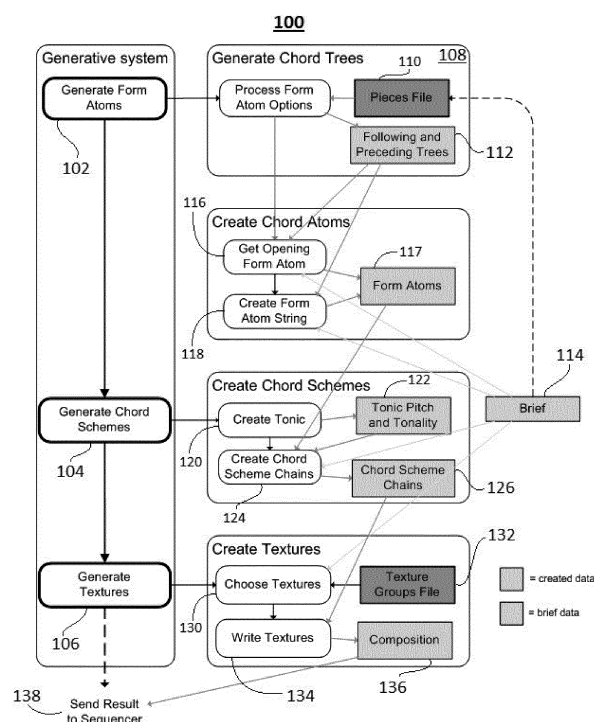


FIG. 8



EUROPEAN SEARCH REPORT

Application Number

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 1 666 967 A1 (MAGIX AG [DE]) 7 June 2006 (2006-06-07) * abstract; figures 1-11 * * paragraph [0013] - paragraph [0022] * * paragraph [0040] - paragraph [0064] * * paragraph [0072] - paragraph [0080] * -----	1, 2, 4, 6-9, 15, 16, 19, 22	INV. G10H1/00
X	WO 2015/154159 A1 (VESPRINI MARK [CA]) 15 October 2015 (2015-10-15) * abstract; figures 1-20 * * paragraph [0062] - paragraph [0085] * * paragraph [00100] - paragraph [00123] * * paragraph [00124] - paragraph [00129] * * paragraph [00137] - paragraph [00147] * * paragraph [00159] - paragraph [00167] * -----	1-3, 5-11, 13-22, 27-29	
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 4 October 2022	Examiner Lecoainte, Michael
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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A	US 2020/188790 A1 (GALUTEN ALBHY [US]) 18 June 2020 (2020-06-18) * abstract; figures 1-5 * * figures 5-8 * -----	23-27	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 4 October 2022	Examiner Lecointe, Michael
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	

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Application Number

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-22, 28, 29 (completely); 27 (partially)

System for generating a musical composition from emotional descriptors for a plurality of musical sections and by concatenating Form Atoms having constructional properties as well as a database of Form Atoms.

2. claims: 23-26 (completely); 27 (partially)

A method for analysing a musical score for identifying a musical texture associated with an emotion.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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