

Title (en)  
WAVE FIELD SYNTHESIS SYSTEM

Title (de)  
WELLENFELDSYNTHESE-SYSTEM

Title (fr)  
SYSTÈME DE SYNTHÈSE DE CHAMP D'ONDES

Publication  
**EP 3061271 A1 20160831 (DE)**

Application  
**EP 14781270 A 20140912**

Priority  
• DE 102013013377 A 20130810  
• IB 2014001806 W 20140912

Abstract (en)  
[origin: WO2015036845A1] The present invention describes an apparatus comprising sound transducers based on the principle of wave field synthesis that can be compiled in a local design to form a freely scalable overall magnitude. The local design of the system ensures the free scalability. The computation complexity in the central system remains independent of the number of sound transducers in the overall system. In previously known apparatuses for reconstructing a sound field based on the principle of wave field synthesis, the demands on the central system rise with the number of sound transducers that it covers. For this reason too, the wave field synthesis is usually reduced to the horizontal plane of the listener, and the third dimension is lost in the reproduction of the sound events. The solution according to the invention allows the model-based approach of wave field synthesis to be also used to construct two-dimensional apparatuses of arbitrary magnitude from sound transducers based on the principle of wave field synthesis that are able to implement rapid changes of location for the virtual sound sources with the associated Doppler effects without artefacts. In this case, the requisite computation power can therefore be distributed locally because the volume of data to be transferred between the subsystems remains comparatively small.

IPC 8 full level  
**H04R 5/02** (2006.01); **H04S 7/00** (2006.01)

CPC (source: EP US)  
**H04R 5/02** (2013.01 - US); **H04S 3/02** (2013.01 - US); **H04S 7/30** (2013.01 - EP US); **H04R 2201/401** (2013.01 - EP US); **H04S 7/302** (2013.01 - EP US); **H04S 2420/13** (2013.01 - EP US)

Citation (search report)  
See references of WO 2015036845A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**DE 102013013377 A1 20150212**; DE 112014003702 A5 20160428; EP 3061271 A1 20160831; EP 3061271 B1 20180404; ES 2674771 T3 20180703; PL 3061271 T3 20181031; TR 201808776 T4 20180723; US 2016192103 A1 20160630; US 9716961 B2 20170725; WO 2015036845 A1 20150319

DOCDB simple family (application)  
**DE 102013013377 A 20130810**; DE 112014003702 T 20140912; EP 14781270 A 20140912; ES 14781270 T 20140912; IB 2014001806 W 20140912; PL 14781270 T 20140912; TR 201808776 T 20140912; US 201414911388 A 20140912