



# SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 22 82 52 46

## Classification of the application (IPC):

H04N 21/431, H04N 9/64, G06T 5/00, G06N 3/04, G06N 3/08, G06N 3/045, G06N 3/0464, G06N 3/09, G06V 10/82

## Technical fields searched (IPC):

G06T

| DOCUMENTS CONSIDERED TO BE RELEVANT |                                                                                                                           |                   |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------|
| Category                            | Citation of document with indication, where appropriate, of relevant passages                                             | Relevant to claim |
| Y<br>A                              | US 2021097646 A1 (CHOI HYUN DAE [KR] ET AL)<br>01 April 2021 (2021-04-01)<br>* paragraph [0189] - paragraph [0244] *      | 1-3, 15<br>4, 5   |
| Y<br>A                              | US 2011096179 A1 (BORDER JOHN N [US] ET AL)<br>28 April 2011 (2011-04-28)<br>* paragraph [0043] - paragraph [0060] *      | 1-3, 15<br>4, 5   |
| A                                   | US 2021133943 A1 (LEE WOON CHAE [KR] ET AL)<br>06 May 2021 (2021-05-06)<br>* paragraph [0150] - paragraph [0186] *        | 1-5, 15           |
| A                                   | JP 2019205073 A (MITSUBISHI ELECTRIC CORP)<br>28 November 2019 (2019-11-28)<br>* paragraph [0020] - paragraph [0040] *    | 4, 5              |
| A                                   | US 2007286523 A1 (KIM SUNG-HEE [KR] ET AL)<br>13 December 2007 (2007-12-13)<br>* paragraph [0036] - paragraph [0073] *    | 4, 5              |
| A                                   | CN 111311524 A (UNIV ELECTRONIC SCI & TECH CHINA)<br>19 June 2020 (2020-06-19)<br>* paragraph [0095] - paragraph [0118] * | 6-14              |
| A                                   | US 2016217338 A1 (LI PENG [CN]) 28 July 2016 (2016-07-28)<br>* paragraph [0025] - paragraph [0129] *                      | 6-14              |

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

|                           |                                                      |                               |
|---------------------------|------------------------------------------------------|-------------------------------|
| Place of search<br>Munich | Date of completion of the search<br>13 November 2023 | Examiner<br>Rockinger, Oliver |
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## CATEGORY OF CITED DOCUMENTS

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| A: technological background                                                     | E: earlier patent document, but published on, or after the filing date |
| O: non-written disclosure                                                       | D: document cited in the application                                   |
| & : member of the same patent family, corresponding document                    | L: document cited for other reasons                                    |

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### 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:

1. claims: 1-5, 15  
video brightness processing
2. claims: 6-14  
improving run-time in neural network based video enhancement

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

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

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|---------------------------|------------------------------------------------------|-------------------------------|
| Place of search<br>Munich | Date of completion of the search<br>13 November 2023 | Examiner<br>Rockinger, Oliver |
|---------------------------|------------------------------------------------------|-------------------------------|

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| O: non-written disclosure                                                       | D: document cited in the application                                   |
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# ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 22 82 52 46

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 13-11-2023  
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