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(19) **United States**(12) **Patent Application Publication**  
**KIM**(10) **Pub. No.: US 2023/0232080 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **A MOBILE ARTIFICIAL NEURAL NETWORK APPARATUS***H04N 21/466* (2006.01)*H04N 21/4722* (2006.01)*H04N 23/65* (2006.01)*G06T 19/00* (2006.01)(71) Applicant: **DEEPX CO., LTD.**, Seongnam-si,  
Gyeonggi-do (KR)(52) **U.S. Cl.**CPC . *H04N 21/6581* (2013.01); *H04N 21/234381*(2013.01); *H04N 21/4666* (2013.01); *H04N**21/4722* (2013.01); *H04N 23/651* (2023.01);*G06T 19/006* (2013.01)(72) Inventor: **Lok Won KIM**, Seongnam-si,  
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**ABSTRACT**

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A mobile artificial neural network device is provided. The mobile artificial neural network device includes a camera configured to output a video of a product at a first frame rate, an AI recognition model configured to recognize a product information by receiving the product video, an artificial neural network processor configured to drive the AI recognition model at a second frame rate, and a display module configured to display the video of the product at the first frame rate and display the product information at the second frame rate.

