

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS, INC.,
Petitioner,

v.

ATI TECHNOLOGIES ULC,
Patent Owner.

Case IPR2017-01225
U.S. Patent No. 8,760,454

**PATENT OWNER'S PRELIMINARY RESPONSE
PURSUANT TO 37 C.F.R. § 42.107(a)**

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I. Introduction & Summary of Arguments

For at least the following reasons, LG's Petition fails to establish the required likelihood that it will prove that challenged claims 2-11 of ATI's U.S. Patent No. 8,760,454 are unpatentable.

- **Challenged claims 3-11** are directed to a unified shader processor that can switch back and forth between executing unfinished vertex and pixel threads, but LG fails to identify any such unified shader processor in the asserted references. In the *Lindholm* reference of Grounds 1 and 2, the purported processor cannot switch between unfinished threads at all, be they pixel, vertex, or other. In the *Stuttard* reference of Grounds 3 and 4, the purported processor unit likewise cannot switch back and forth between unfinished vertex and pixel threads, but must instead finish executing all vertex threads before it can begin executing any pixel threads.

- **Challenged claim 2** requires a unified shader processor that executes certain pixel or vertex thread instructions in response to receiving selected data from a data register. But LG's Petition does not even allege that the purported processor units of *Lindholm* or *Stuttard* execute any of those pixel or vertex thread instructions "in response to" the selected data as required by the explicit claim language. Instead, the Petition ignores the limitation altogether.

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