

2 December 2008

By: Ionut Arghire, Hardware Editor



Core i7 does not have  
TBL issues  
Intel

## [Intel Denies Core i7 Having TBL Issues](#)

*The company says the issues are connected to CPUs released prior to Nehalem*

The latest [news](#) on the web suggests the fact that Intel's recently launched Core i7 chips would suffer from a Translation Lookaside Buffer-related erratum. The TBL issue appears on an Intel PDF, namely on page 37 AAJ1 Clarification of TRANSLATION LOOKASIDE BUFFERS (TLBS) Invalidation part, which can be seen [here](#), and there are some voices that connect it to the issues AMD's Phenom and Opterons based on 65nm K10 cores had in the past.

On the Intel [document](#), users can read the following, "In rare instances, improper TLB invalidation may result in unpredictable system behavior, such as system hangs or incorrect data. Developers of operating systems should take this documentation into account when designing TLB invalidation algorithms. For the processors affected, Intel has provided a recommended update to system and BIOS vendors to incorporate into their BIOS to resolve this issue".

According to Dan Snyder, Intel PR manager, cited by news site Hardspell, "This is simply a pointer to a previous document written in April 2007. This document is an application note (advises on programming techniques) that programmers have had since April of 2007. This item in the Nehalem spec sheet is a web pointer, under the heading 'spec clarification'. The reporter who wrote this did not contact us and we will try to clarify this with him".

Since any issue with the Nehalem architecture might greatly affect sales, the way it happened with AMD's quad-core Opteron chips, which began shipping after months of delays, a clarification from the giant chip manufacturer was required. Dan Snyder is [reported](#) to have sent such a clarification note, which states that the TBL issue was connected to previous CPUs, the specifications clarification pointing to a document dated April 2007.

'The 'AAJ1 Clarification of TRANSLATION LOOKASIDE BUFFERS' document is a SPEC CLARIFICATION, and is simply a pointer to a previous document written in April 2007. SPEC CLARIFICATION AAJ1 was initially added due to an issue on the Intel Core 2 Duo processor which was previously corrected with a BIOS update; this issue does not impact the Nehalem Family of CPUs. There are errata on the Intel Core i7 processor that relate to the TLB. These all relate to improper translations or error reporting, and all of those that impact functionality have been fixed via BIOS updates prior to Core i7 launch."