Errata for 'Using Advanced MPI'

December 9, 2015

p6 The formula in the computation for the number of neighbors in Conway's Game of Life has an error in it. The second term on the third line should be `u[i-1][j]`. That is, the computation is

$$
\begin{aligned}
\mathrm{nbrs} = \; & u[i+1][j+1] \;+\; u[i+1][j] \;+\; u[i+1][j-1] \;+\; \\
& u[i][j+1] \qquad\quad + \qquad\qquad\quad u[i][j-1] \qquad\; + \\
& u[i-1][j+1] \;+\; u[i-1][j] \;+\; u[i-1][j-1];
\end{aligned}
$$

Thanks to Yang Shangqin.

Section 8.2 (Pages 243ff.) This is not exactly an errata, but the section describes several of the functions for working with `MPI_Count`, but omits one of the most important, `MPI_Get_elements_x`, the `MPI_Count` counterpart of `MPI_Get_elements`. This routine is described on page 113 in the MPI 3.1 standard.

p256-264 This is not exactly an errata, but the book was published before the `MPI_T_pvar_get_index` and `MPI_T_cvar_get_index` routines were officially adopted by the MPI Forum into MPI. Until those routines become part of MPI, it is necessary to search through all defined control or performance varibles by index to find the index that matches a name. Code for that is available on the web site, in the examples for the chapter "Support for Performance and Correctness Debugging."

p273 Figure 10.2, on the right, has `MPI_Int` where it should have `MPI_Init` (`MPI_Init_thread` would also be correct there). The figure should be:
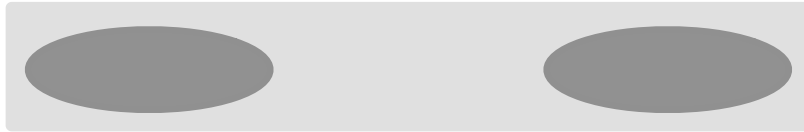
In the parents   **In the children**

MPI_Comm_spawn   **MPI_Init**

Intercommunicator

Returned by MPI_Comm_spawn   **Returned by MPI_Comm_parent**

and is available for download as advmpi-spawn.pdf .

Thanks to Jeff Hammond.