GASPI proposal: Various Clarifications

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This is a collection of small bug reports and proposed changes to the standard. Changes are marked bold throughout the document.

1 Wrong gaspi_group_add signature

The group parameter of gaspi_group_add is a simple [in] parameter and it doesn’t need to be passed to the function via a pointer.

Proposed Changes
In sec. 6.3.2 (gaspi_group_add) change the following item:

\((\text{inout}) \text{group}: \) the group to which the rank is added

becomes:

\((\text{in}) \text{group}: \) the group to which the rank is added

2 Safety of gaspi_barrier in multi-threaded applications not exactly stated

The following statement in sec. 11.2.1 intends to describe the safety of barrier calls in multi-threaded applications:

Starting a barrier operation in another thread before a previously invoked barrier is finished on all processes of the group is not allowed and yields undefined behavior.

This seems to imply, that the gaspi_barrier calls of all participating processes have to be finished (i.e. returned to their caller). This is not necessary. If a gaspi_barrier returns successfully, then all communication regarding that barrier should be completed anyway at the local process.
Proposed Changes
Relax the above statement as follows:

Starting a barrier operation in another thread \textit{of a process} before a previously invoked barrier \textit{of the same group} is finished \textit{at that process} is not allowed and yields undefined behavior.

3 \ gaspi\_error\_meassage \ undefined

The function \texttt{gaspi\_error\_message} is mentioned in sec. 3.11 and used in example A.1. Instead the function \texttt{gaspi\_print\_error} (defined in sec. 13.3.2) is meant.

Proposed Changes
Replace all occurrences of \texttt{gaspi\_error\_message} with \texttt{gaspi\_print\_error}.

4 Sorting of ranks in a group

The description of \texttt{gaspi\_group\_add} in sec.6.3.2 states:

Whenever you add a rank the list of ranks is sorted in ascending order.

Whether ranks are stored sorted within a group, is an implementation detail. The intention is, that \texttt{gaspi\_group\_ranks} returns the ranks in sorted order.

Proposed Changes
In sec. 6.3.2 remove the above quote. In sec. 6.5.3 change the description as follows:

After successful procedure completion, i.e. return value \texttt{GASPI\_SUCCESS}, the list \texttt{group\_ranks} contains the ranks of the processes \textit{in ascending order} that belong to the \texttt{group}. 