

What is a communication descriptor?

An opaque object that:

- Keeps track of the parallel machine (ctxt);
- Is associated with a discretization topology (mesh graph plus discretization stencil);
- Stores the mapping of the index space onto the parallel machine;
- Contains all the data necessary to implement a neighbour-to-neighbour data exchange (or: halo data exchange; or: ghost cell update; or: persistent neighborhood all-to-all on a virtual distributed graph topology)

```
psb_i_t ^^I psb_c_dhalo(psb_c_dvector *x,  
                           ^^I psb_c_descriptor *desc_a);  
                           ^^I
```