

Opensource compiler for motorola internal language

[Git repo \(http\)](#)

Orthogonal aspects

Orthogonal aspects must be decoupled to the maximal possible extent:

- output language
- output file structure
- user data structures and field names
- memory allocation

Output files structure (C)

.h

- includes
- enumerations
- struct typedefs
- structures
- prototypes

.c

- includes
- internal declarations
- field packers/unpackers
- message packers/unpackers
- interface packers/unpackers

Pack/unpack signature

```
<pack return type>
pack_<interface name>(
    SignalType signal, /* signal type */
    Param1_t_uunion *p1, /* only present when interface has explicit header
*/
    Param2_t_uunion *p2, /* signal data */
    Param3_t_uunion *p3, /* only present when interface has explicit trailer
*/
    <pdu arg type> pdu, /* pdu output buffer */
    <pdu size arg type> sz /* pdu buffer size */
```

```
);  
  
<unpack return type>  
unpack_<interface name>(  
    <pdu arg type> pdu, /* input pdu buffer */  
    <pdu size arg type> sz, /* pdu buffer size */  
    SignalType *signal, /* signal type */  
    Param1_t_uunion **p1, /* only present when interface has explicit header  
*/  
    Param2_t_uunion **p2, /* signal data */  
    Param3_t_uunion **p3, /* only present when interface has explicit  
trailer */  
);
```

Decoding context

- basic part:
 - bit stream location (byte offset, bit offset)
 - memory allocation context
- custom part:
 - internal variables (managed by 'internal variable assignment' clause)

Field decoder function signature

```
<unpack return type>  
unpack_<field name>(  
    <decoding context type> * dc, /* data location, updated during unpacking  
*/  
    <field type> * p /* filled in by this unpack */  
);
```

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