

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
with non-autogenerated fields */
    Param2_t_uunion *p2, /* only present when interface has explicit trailer
*/
    Param3_t_uunion *p3, /* signal data */
    <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
with non-autogenerated fields */
    Param2_t_uunion **p2, /* only present when interface has explicit
trailer */
    Param3_t_uunion **p3, /* signal data */
);
```

When the header is absent Param1 corresponds to the trailer. If there's no trailer, its parameter number corresponds to the signal data.

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 */
);
```

Union member naming

Header:

```
Param1_t_uunion
{
    <interface name>_t <interface name>;
};
```

Trailer:

```
Param2_t_uunion
{
    <interface name>_trailer_t <interface name>_trailer;
};
```

Signal:

```
Param3_t_uunion
{
    <message name>_t <message name>;
};
```

From:

<http://wiki.osll.ru/> - **Open Source & Linux Lab**

Permanent link:

<http://wiki.osll.ru/doku.php/etc:users:jcmvbkbc:isl?rev=1279618337>

Last update: **2010/07/20 13:32**

