

lfe_macro(3)

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NAME

lfe_macro - Lisp Flavoured Erlang (LFE) macro expander

SYNOPSIS

This module provides an interface to the LFE macro expander. The expander is used by the LFE compile and in the shell but can also be used by applications explicitly wanting to handle a file.

DATA TYPES

sexpr()

An LFE s-expression, a list structure.

filesexpr() = {Sexpr,Line}

This is the format returned by `lfe_io:parse_file/1` and is used by the compiler to give better error information.

env()

This is an macro and evaluation environment as created by `lfe_lib:new_env()`.

mac_state()

This is the internal state used by the macro expander.

EXPORTS

expand_expr(Sexpr, Env) -> {yes,Exp} | no.

expand_expr_1(Sexpr, Env) -> {yes,Exp} | no.

where

```
Sexpr = Exp = sexpr()  
Env = env()
```

Test if the top s-expression here is a macro call, if so expand it and return {yes,Expansion}, if not then return no. `expand_expr/2` will expand the top s-expression as much as possible while `expand_expr_1/2` will only try it once. These functions use the macro definitions in the environment and the standard pre-defined macros.

expand_expr_all(Sexpr, Env) -> Sexpr.

where

```
Sexpr = sexpr()  
Env = env()
```

Expand all macros in Sexpr either using the definitions in Env or just the default macros. Note that any eventual new macro definitions will be lost.

expand_form_init(Deep, Keep) -> MacState

where

```
Deep = boolean()
Keep = boolean()
MacState = mac_state()
```

Create an internal macro state. Deep determines whether the form is to be expanded internally at depth and Keep whether macro definition forms are to be kept.

expand_fileforms([FileForm], Env, Deep, Keep) -> ExpRet

expand_fileforms([FileForm], Env, MacState) -> ExpRet

where

```
FileForm = filesexpr()
Env = env()
Deep = boolean()
Keep = boolean()
MacState = mac_state()
ExpRet = {yes,[FileSexpr],Env,Warnings} |
         {error,Errors,Warnings}
```

expand a sequence of file forms.

expand_form(Form, Line, Env, MacState) -> RetState

expand_fileform(FileForm, Env, MacState) -> RetState

where

```
Form = sexpr()
FileForm = filesexpr()
Line = integer()
Env = env()
MacState = mac_state()
RetState = {ok,Form,Env,Macstate} |
           {error,Errors,Warnings,MacState}
```

Expand a file form using the environment and macro state.

SEE ALSO

lfe_comp(3), lfe_gen(3)