

1. Copyright.

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2. *rule_lhs_phrase* Thread.

Parse rule's lhs construct.

Example of a rule's lhs to parse:

```

/*
file: rulelhs.txt
Why: example of text to parse by rule_lhs_phrase grammar.
*/
lhs {
    user-declaration
        AST* cweb_t_;
    ***
    constructor
        cweb_t_ = 0;
    ***
}

```

This thread is a “chained procedure call”.

3. Fsm Crule_lhs_phrase class.**4. Crule_lhs_phrase constructor directive.**

⟨Crule_lhs_phrase constructor directive 4⟩ ≡
rule_lhs_phrase_ = 0;

5. Crule_lhs_phrase op directive.

⟨Crule_lhs_phrase op directive 5⟩ ≡
if (*rule_lhs_phrase_* ≠ 0) {
 delete *rule_lhs_phrase_;*
 rule_lhs_phrase_ = 0;
}
rule_lhs_phrase_ = **new** *T_rule_lhs_phrase;*
rule_lhs_phrase_→*set_rc*(**parser_*→*start_token_*, __FILE__, __LINE__);
AST **t* = **new** **AST**(**rule_lhs_phrase_*);
rule_lhs_phrase_→*phrase_tree*(*t*);

6. Crule_lhs_phrase user-declaration directive.

⟨Crule_lhs_phrase user-declaration directive 6⟩ ≡
public: void *add_sdc_to_directive*(*yacco2* :: *CAbs_lr1_sym* * *Dir*, *T_syntax_code* * *Sdc*);
 T_rule_lhs_phrase * *rule_lhs_phrase_;*

7. Crule_lhs_phrase user-implementation directive.

```

⟨ Crule_lhs_phrase user-implementation directive 7 ⟩ ≡
  void Crule_lhs_phrase::add_sdc_to_directive(yacco2::CAbs_lr1_sym * Dir, T_syntax_code * Sdc){ using
    namespace NS_yacco2_T_enum;
    using namespace NS_yacco2_terminals;
    yacco2::INT eid = Dir-enumerated_id_; switch (eid) { case T_Enum::T_T_user_declaration_: {
      T_user_declaration * k = ( T_user_declaration * ) Dir;
      k->syntax_code(Sdc);
      break; } case T_Enum::T_T_constructor_: { T_constructor * k = ( T_constructor * ) Dir;
      k->syntax_code(Sdc);
      break; } case T_Enum::T_T_destructor_: { T_destructor * k = ( T_destructor * ) Dir;
      k->syntax_code(Sdc);
      break; } case T_Enum::T_T_op_: { T_op * k = ( T_op * ) Dir;
      k->syntax_code(Sdc);
      break; } case T_Enum::T_T_user_implementation_: { T_user_implementation * k = (
        T_user_implementation * ) Dir;
      k->syntax_code(Sdc);
      break; }
    default:
      {
        CAbs_lr1_sym * sym = new Err_improper_directive;
        sym->set_rc(*Dir, __FILE__, __LINE__);
        RSVP_FSM(sym);
        parser__->set_stop_parse(true);
        return;
      }
    } rule_lhs_phrase->add_directive_to_lhs(Dir, parser__); }

```

8. Crule_lhs_phrase user-prefix-declaration directive.

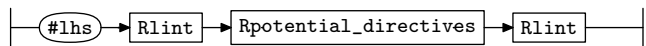
```

⟨ Crule_lhs_phrase user-prefix-declaration directive 8 ⟩ ≡
  using namespace NS_yacco2_terminals;
  #include "lint_balls.h"
  #include "cweb_or_c_k.h"
  #include "identifier.h"
  #include "c_string.h"
  #include "o2_sdc.h"

```

9. Rrule_lhs_phrase rule.

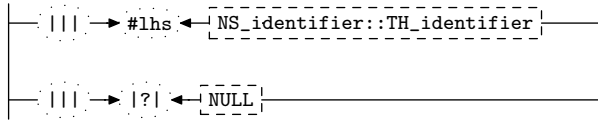
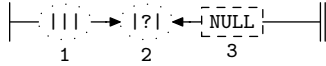
Rrule_lhs_phrase



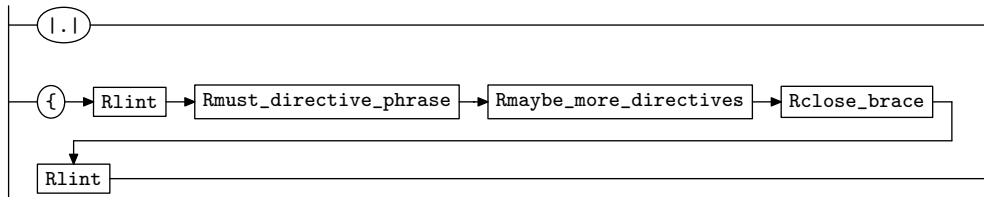
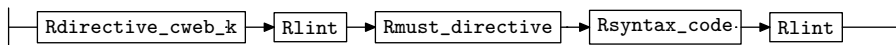
```

⟨ Rrule_lhs_phrase subrule 1 op directive 9 ⟩ ≡
  Crule_lhs_phrase * fsm = ( Crule_lhs_phrase * ) rule_info...parser__-fsm_tbl_;
  RSVP(fsm->rule_lhs_phrase_);
  fsm->rule_lhs_phrase_ = 0;

```

10. *Rlhs* rule.*Rlhs*11. *Rlhs*'s subrule 2.

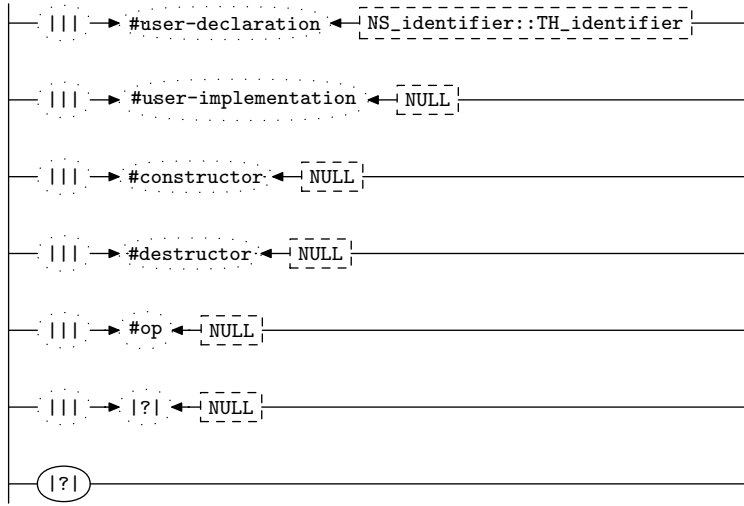
⟨ *Rlhs* subrule 2 op directive 11 ⟩ ≡
*rule_info...*parser--set_abort_parse(true);

12. *Rpotential_directives* rule.*Rpotential_directives*13. *Rmust_directive_phrase* rule.*Rmust_directive_phrase*

⟨ *Rmust_directive_phrase* subrule 1 op directive 13 ⟩ ≡
 AST * cwebt = sf→p1--cweb.t;
 Rmust_directive * dir = sf→p3--;
 Rsyntax_code * sdc = sf→p4--;
 if (cwebt ≠ 0) sdc→syntax_code→add_cweb_marker(cwebt);
 Crule_lhs_phrase * fsm = (Crule_lhs_phrase *) rule_info...parser--fsm.tbl--;
 fsm→add_sdc_to_directive(dir→directive_, sdc→syntax_code_);

14. *Rmust_directive* rule.

Rmust_directive



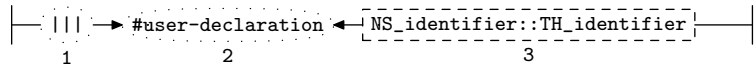
15. *Rmust_directive* constructor directive.

$\langle \text{Rmust_directive constructor directive 15} \rangle \equiv$
directive_ = 0;

16. *Rmust_directive* user-declaration directive.

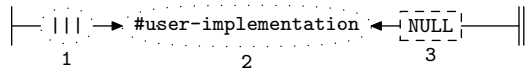
$\langle \text{Rmust_directive user-declaration directive 16} \rangle \equiv$
CAbs_lr1_sym * *directive_*;

17. *Rmust_directive*'s subrule 1.



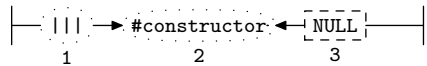
$\langle \text{Rmust_directive subrule 1 op directive 17} \rangle \equiv$
directive_ = *sf-p2_*;

18. *Rmust_directive*'s subrule 2.

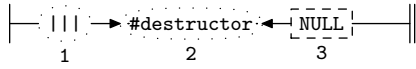


$\langle \text{Rmust_directive subrule 2 op directive 18} \rangle \equiv$
directive_ = *sf-p2_*;

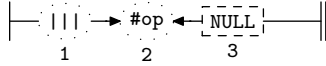
19. *Rmust_directive*'s subrule 3.



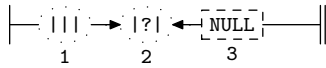
$\langle \text{Rmust_directive subrule 3 op directive 19} \rangle \equiv$
directive_ = *sf-p2_*;

20. *Rmust_directive*'s subrule 4.

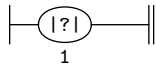
$\langle \text{Rmust_directive subrule 4 op directive 20} \rangle \equiv$
directive_ = sf→p2_;

21. *Rmust_directive*'s subrule 5.

$\langle \text{Rmust_directive subrule 5 op directive 21} \rangle \equiv$
directive_ = sf→p2_;

22. *Rmust_directive*'s subrule 6.

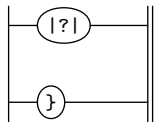
$\langle \text{Rmust_directive subrule 6 op directive 22} \rangle \equiv$
directive_ = 0;
sf→p2_→set_auto_delete(true);
*CAbs_lr1_sym * sym = new Err_bad_directive;*
*sym→set_rc(*sf→p2_, __FILE__, __LINE__);*
RSVP(sym);
rule_info_.parser_→set_stop_parse(true);

23. *Rmust_directive*'s subrule 7.

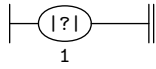
$\langle \text{Rmust_directive subrule 7 op directive 23} \rangle \equiv$
*CAbs_lr1_sym * sym = new Err_no_directive_present;*
*sym→set_rc(*rule_info_.parser_→current_token(), __FILE__, __LINE__);*
RSVP(sym);
rule_info_.parser_→set_stop_parse(true);

24. *Rclose_brace* rule.

Rclose_brace



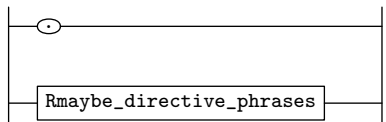
25. Rclose_brace's subrule 1.



⟨ Rclose_brace subrule 1 op directive 25 ⟩ ≡
CAbs_lr1_sym * *sym* = **new** *Err_no_close_brace*;
sym→*set_rc*(**rule_info*→*parser*→*current_token*(), *__FILE__*, *__LINE__*);
RSVP(*sym*);
rule_info→*parser*→*set_stop_parse*(*true*);

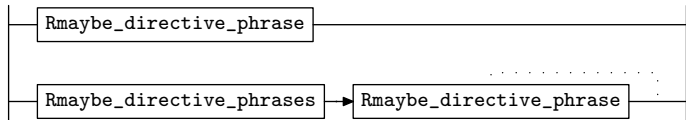
26. Rmaybe_more_directives rule.

Rmaybe_more_directives



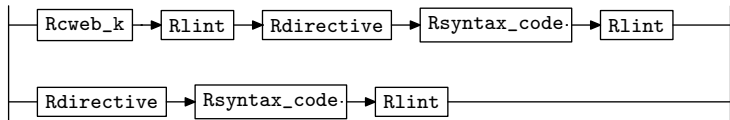
27. Rmaybe_directive_phrases rule.

Rmaybe_directive_phrases

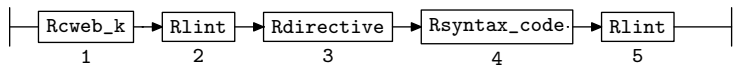


28. Rmaybe_directive_phrase rule.

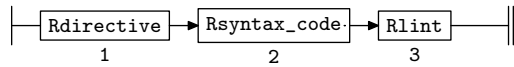
Rmaybe_directive_phrase



29. Rmaybe_directive_phrase's subrule 1.



⟨ Rmaybe_directive_phrase subrule 1 op directive 29 ⟩ ≡
AST * *cwebt* = *sf*→*p1*→*cweb_t*;
Rdirective * *dir* = *sf*→*p3*→;
Rsyntax_code * *sdc* = *sf*→*p4*→;
if (*cwebt* ≠ 0) *sdc*→*syntax_code*→*add_cweb_marker*(*cwebt*);
Crule_lhs_phrase * *fsm* = (*Crule_lhs_phrase* *) *rule_info*→*parser*→*fsm_tbl*→;
fsm→*add_sdc_to_directive*(*dir*→*directive*→, *sdc*→*syntax_code*→);

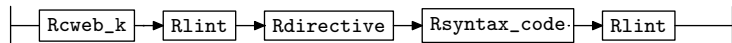
30. *Rmaybe_directive_phrase's* subrule 2.

\langle *Rmaybe_directive_phrase* subrule 2 op directive 30 $\rangle \equiv$

```
Rdirective * dir = sf-p1--;
Rsyntax_code * sdc = sf-p2--; Crule_lhs_phrase * fsm = ( Crule_lhs_phrase * ) rule_info...parser--fsm_tbl--;
fsm-add_sdc_to_directive(dir-directive_, sdc-syntax_code_);
```

31. *Rdirective_phrase* rule.

Rdirective_phrase

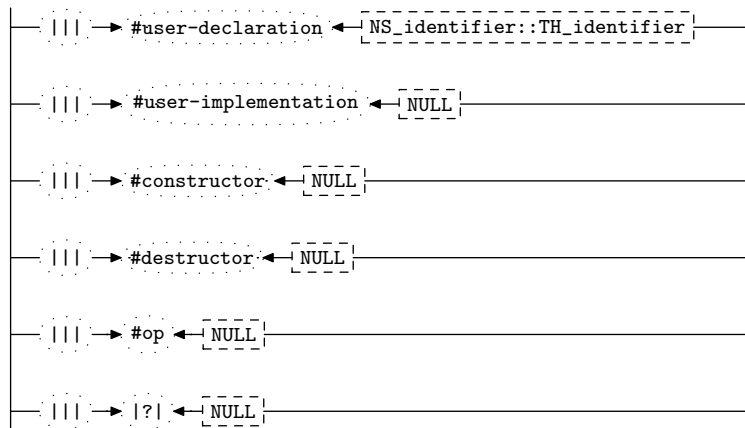


\langle *Rdirective_phrase* subrule 1 op directive 31 $\rangle \equiv$

```
AST * cwebt = sf-p1--cweb_t_;
Rdirective * dir = sf-p3--;
Rsyntax_code * sdc = sf-p4--;
if ( cwebt  $\neq$  0 ) sdc-syntax_code--add_cweb_marker(cwebt);
Crule_lhs_phrase * fsm = ( Crule_lhs_phrase * ) rule_info...parser--fsm_tbl--;
fsm-add_sdc_to_directive(dir-directive_, sdc-syntax_code_);
```

32. *Rdirective* rule.

Rdirective

**33. *Rdirective* constructor directive.**

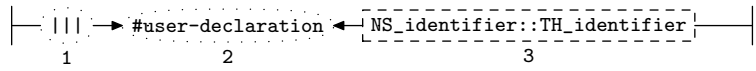
\langle *Rdirective* constructor directive 33 $\rangle \equiv$

```
directive_ = 0;
```

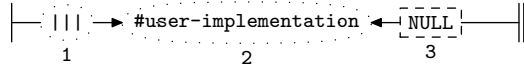
34. *Rdirective* user-declaration directive.

\langle *Rdirective* user-declaration directive 34 $\rangle \equiv$

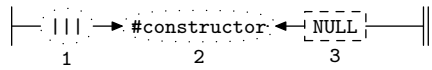
```
CAbs_lr1_sym * directive_;
```


35. Rdirective's subrule 1.

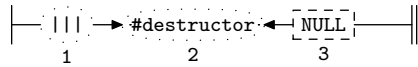
⟨Rdirective subrule 1 op directive 35⟩ ≡
directive_ = sf-p2_;

36. Rdirective's subrule 2.

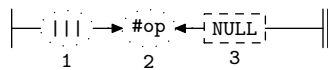
⟨Rdirective subrule 2 op directive 36⟩ ≡
directive_ = sf-p2_;

37. Rdirective's subrule 3.

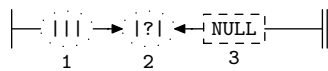
⟨Rdirective subrule 3 op directive 37⟩ ≡
directive_ = sf-p2_;

38. Rdirective's subrule 4.

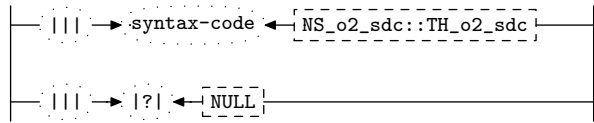
⟨Rdirective subrule 4 op directive 38⟩ ≡
directive_ = sf-p2_;

39. Rdirective's subrule 5.

⟨Rdirective subrule 5 op directive 39⟩ ≡
directive_ = sf-p2_;

40. Rdirective's subrule 6.

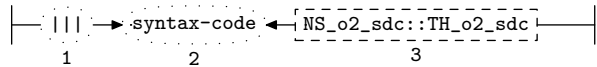
⟨Rdirective subrule 6 op directive 40⟩ ≡
directive_ = 0;
sf-p2_→set_auto_delete(true);
*CAbs_lr1_sym * sym = new Err_bad_directive;*
*sym→set_rc(*sf-p2_, __FILE__, __LINE__);*
RSVP(sym);
rule_info...parser_→set_stop_parse(true);

41. *Rsyntax_code* rule.*Rsyntax_code***42. *Rsyntax_code* constructor directive.**

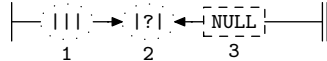
⟨*Rsyntax_code* constructor directive 42⟩ ≡
syntax_code_ = 0;

43. *Rsyntax_code* user-declaration directive.

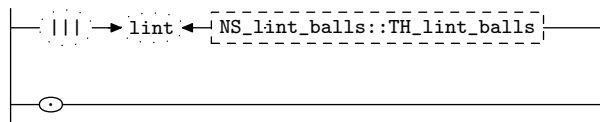
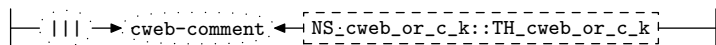
⟨*Rsyntax_code* user-declaration directive 43⟩ ≡
T_syntax_code * *syntax_code_*;

44. *Rsyntax_code*'s subrule 1.

⟨*Rsyntax_code* subrule 1 op directive 44⟩ ≡
syntax_code_ = *sf-p2_*;

45. *Rsyntax_code*'s subrule 2.

⟨*Rsyntax_code* subrule 2 op directive 45⟩ ≡
 RSVP(*sf-p2_*);
rule_info_.*parser_*→*set_stop_parse*(*true*);

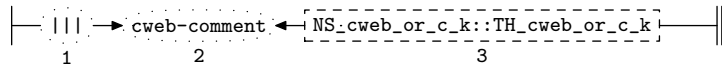
46. *Rlint* rule.*Rlint***47. *Rcweb_marker* rule.***Rcweb_marker***48. *Rcweb_marker* constructor directive.**

⟨*Rcweb_marker* constructor directive 48⟩ ≡
cweb_t_ = 0;

49. *Rcweb_marker* user-declaration directive.

⟨*Rcweb_marker* user-declaration directive 49⟩ ≡
 AST * *cweb_t_*;

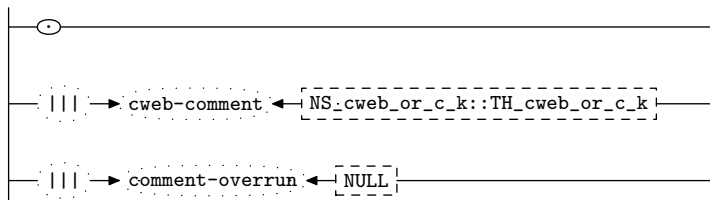
50. Rweb_marker's subrule 1.



\langle Rweb_marker subrule 1 op directive 50 $\rangle \equiv$
T_cweb_comment * *k* = *sf-p2_*;
 AST * *cwebk_t_* = new AST(**k*);
cweb_t_ = new AST();
T_cweb_marker * *cw* = new *T_cweb_marker*(*cweb_t_*);
cw-set_rc(**k*, __FILE__, __LINE__);
 AST::*set_content*(**cweb_t_*, **cw*);
 AST::*join_pts*(**cweb_t_*, **cwebk_t_*);

51. Rdirective_cweb_k rule.

Rdirective_cweb_k



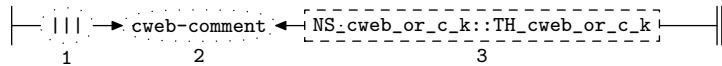
52. Rdirective_cweb_k constructor directive.

\langle Rdirective_cweb_k constructor directive 52 $\rangle \equiv$
cweb_t_ = 0;

53. Rdirective_cweb_k user-declaration directive.

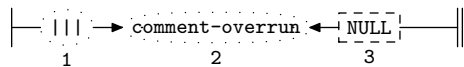
\langle Rdirective_cweb_k user-declaration directive 53 $\rangle \equiv$
 AST * *cweb_t_*;

54. Rdirective_cweb_k's subrule 2.



\langle Rdirective_cweb_k subrule 2 op directive 54 $\rangle \equiv$
T_cweb_comment * *k* = *sf-p2_*;
 AST * *cwebk_t_* = new AST(**k*);
cweb_t_ = new AST();
T_cweb_marker * *cw* = new *T_cweb_marker*(*cweb_t_*);
cw-set_rc(**k*, __FILE__, __LINE__);
 AST::*set_content*(**cweb_t_*, **cw*);
 AST::*join_pts*(**cweb_t_*, **cwebk_t_*);

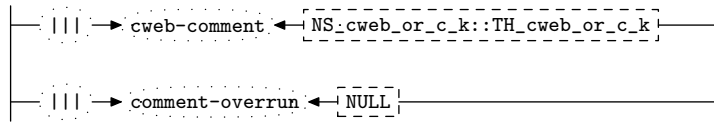
55. Rdirective_cweb_k's subrule 3.



\langle Rdirective_cweb_k subrule 3 op directive 55 $\rangle \equiv$
 RSVP(*sf-p2_*);
rule_info_...parser_->*set_stop_parse*(*true*);

56. Rcweb_k rule.

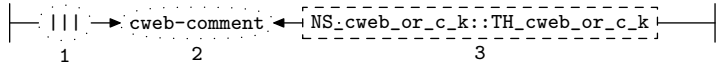
Rcweb_k

**57. Rcweb_k constructor directive.**

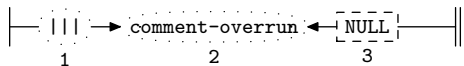
⟨Rcweb_k constructor directive 57⟩ ≡
cweb_t_ = 0;

58. Rcweb_k user-declaration directive.

⟨Rcweb_k user-declaration directive 58⟩ ≡
 AST * *cwebk_t_*;

59. Rcweb_k's subrule 1.

⟨Rcweb_k subrule 1 op directive 59⟩ ≡
T_cweb_comment * *k* = *sf-p2_*;
 AST * *cwebk_t_* = new AST(**k*);
cweb_t_ = new AST();
T_cweb_marker * *cw* = new *T_cweb_marker*(*cweb_t_*);
cw-set_rc(**k*, __FILE__, __LINE__);
 AST::*set_content*(**cweb_t_*, **cw*);
 AST::*join_pts*(**cweb_t_*, **cwebk_t_*);

60. Rcweb_k's subrule 2.

⟨Rcweb_k subrule 2 op directive 60⟩ ≡
 RSVP(*sf-p2_*);
rule_info_.parser_→*set_stop_parse*(*true*);

61. First Set Language for O_2^{linker} .

```
/*
  File: rule_lhs_phrase.fsc
  Date and Time: Fri Jan  2 15:33:53 2015
*/
transitive    n
grammar-name  "rule_lhs_phrase"
name-space    "NS_rule_lhs_phrase"
thread-name   "TH_rule_lhs_phrase"
monolithic    n
file-name     "rule_lhs_phrase.fsc"
no-of-T       569
list-of-native-first-set-terminals 1
  T_lhs
end-list-of-native-first-set-terminals
list-of-transitive-threads 0
end-list-of-transitive-threads
list-of-used-threads 4
  NS_cweb_or_c_k::TH_cweb_or_c_k
  NS_identifier::TH_identifier
  NS_lint_balls::TH_lint_balls
  NS_o2_sdc::TH_o2_sdc
end-list-of-used-threads
fsm-comments
"Parse a rule's 'lhs' directive."
```

62. Lr1 State Network.

\Rightarrow					State: 1 state type: s				
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
c	Rrule_lhs_phrase		1	1	1		# lhs		1 2 16
\Rightarrow	$\#lhs$						State: 2 state type: s/r		
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
c	Rlint		13	2	1		ϵ		2 0 2 1
c	Rlint		13	1	1		lint NS lint_balls::TH lint_balls		2 12 13
t	Rrule_lhs_phrase		1	1	2		Rlint <u>Rpotential_directives</u>		1 3 16
\Rightarrow	$Rlint$						State: 3 state type: s		
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
c	Rpotential_directives		3	1	1		.		3 4 4
c	Rpotential_directives		3	2	1		{		3 5 14
t	Rrule_lhs_phrase		1	1	3		Rpotential_directives <u>Rlintϵ</u>		1 15 16
\Rightarrow	$. $						State: 4 state type: r		
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
t	Rpotential_directives		3	1	2				3 0 4 2
\Rightarrow	$\{$						State: 5 state type: s/r		
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
c	Rlint		13	2	1		ϵ		5 0 5 3
c	Rlint		13	1	1		lint NS lint_balls::TH lint_balls		5 12 13
t	Rpotential_directives		3	2	2		Rlint <u>Rmust_directive_phrase</u>		3 6 14
\Rightarrow	$Rlint$						State: 6 state type: s/r		
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
c	Rdirective_cweb_k		15	1	1		ϵ		6 0 6 3
c	Rdirective_cweb_k		15	2	1		cweb-comment NS_cweb_or_c_k::TH_cweb_or_c_k		6 17 18
c	Rdirective_cweb_k		15	3	1		comment-overrun NULL		6 17 19
t	Rpotential_directives		3	2	3		Rmust_directive_phrase <u>Rmaybe_more_directivesϵ</u> <u>Rclose_brace</u>		3 7 14
c	Rmust_directive_phrase		4	1	1		Rdirective_cweb_k <u>Rlintϵ</u> <u>Rmust_directive</u>		6 20 27
\Rightarrow	$Rmust_directive_phrase$						State: 7 state type: s/r		
\leftarrow	rule	\rightarrow	R#	sr#	Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
c	Rmaybe_more_directives		7	1	1		ϵ		7 0 7 4
c	Rdirective		11	2	1		# user-implementation NULL		7 28 34
c	Rdirective		11	4	1		# destructor NULL		7 28 32
c	Rdirective		11	6	1		? NULL		7 28 29
c	Rcweb_k		16	1	1		cweb-comment NS_cweb_or_c_k::TH_cweb_or_c_k		7 28 35
c	Rdirective		11	1	1		# user-declaration NS_identifier::TH_identifier		7 28 30
c	Rdirective		11	3	1		# constructor NULL		7 28 31
c	Rdirective		11	5	1		# op NULL		7 28 33
c	Rcweb_k		16	2	1		comment-overrun NULL		7 28 36
t	Rpotential_directives		3	2	4		Rmaybe_more_directives <u>Rclose_brace</u>		3 8 14
c	Rmaybe_more_directives		7	2	1		Rmaybe_directive_phrases		7 37 37
c	Rmaybe_directive_phrases		8	2	1		Rmaybe_directive_phrases <u>Rmaybe_directive_phrase</u>		7 37 38
c	Rmaybe_directive_phrases		8	1	1		Rmaybe_directive_phrase		7 47 47
c	Rmaybe_directive_phrase		9	2	1		Rdirective <u>Rsyntax_code</u>		7 39 41

c Rmaybe_directive_phrase	9	1	1	Rcweb.k <u>Rlint</u> ^ε <u>Rdirective</u>		7	42	46
⇒ <i>Rmaybe_more_directives</i>				State: 8 state type: <i>s</i>				
← rule	→ R#	sr#	Po	← subrule element	→ Brn	Gto	Red	LA
c Rclose_brace	6	1	1	?	8	9	9	
c Rclose_brace	6	2	1	}	8	10	10	
t Rpotential_directives	3	2	5	Rclose_brace <u>Rlint</u> ^ε	3	11	14	
⇒ <i> ? </i>				State: 9 state type: <i>r</i>				
← rule	→ R#	sr#	Po	← subrule element	→ Brn	Gto	Red	LA
t Rclose_brace	6	1	2		8	0	9	2
⇒ <i>}</i>				State: 10 state type: <i>r</i>				
← rule	→ R#	sr#	Po	← subrule element	→ Brn	Gto	Red	LA
t Rclose_brace	6	2	2		8	0	10	2
⇒ <i>Rclose_brace</i>				State: 11 state type: <i>s/r</i>				
← rule	→ R#	sr#	Po	← subrule element	→ Brn	Gto	Red	LA
c Rlint	13	2	1	ε	11	0	11	2
c Rlint	13	1	1	lint NS_lint_balls::TH_lint_balls	11	12	13	
t Rpotential_directives	3	2	6	Rlint	3	14	14	
⇒ <i> arbitration-code: ε</i>				State: 12 state type: <i>s</i>				
← rule	→ R#	sr#	Po	← subrule element	→ Brn	Gto	Red	LA
t Rlint	13	1	2	lint	11	13	13	
⇒ <i>lint</i>				State: 13 state type: <i>r</i>				
← rule	→ R#	sr#	Po	← subrule element	→ Brn	Gto	Red	LA
t Rlint	13	1	3		11	0	13	2
⇒ <i>Rlint</i>				State: 14 state type: <i>r</i>				
← rule	→ R#	sr#	Po	← subrule element	→ Brn	Gto	Red	LA
t Rpotential_directives	3	2	7		3	0	14	2
⇒ <i>Rpotential_directives</i>				State: 15 state type: <i>s/r</i>				
← rule	→ R#	sr#	Po	← subrule element	→ Brn	Gto	Red	LA
c Rlint	13	2	1	ε	15	0	15	2
c Rlint	13	1	1	lint NS_lint_balls::TH_lint_balls	15	12	13	
t Rrule_lhs_phrase	1	1	4	Rlint	1	16	16	
⇒ <i>Rlint</i>				State: 16 state type: <i>r</i>				
← rule	→ R#	sr#	Po	← subrule element	→ Brn	Gto	Red	LA
t Rrule_lhs_phrase	1	1	5		1	0	16	2
⇒ <i> arbitration-code: ε</i>				State: 17 state type: <i>s</i>				
← rule	→ R#	sr#	Po	← subrule element	→ Brn	Gto	Red	LA
t Rdirective_cweb_k	15	2	2	cweb-comment	6	18	18	
t Rdirective_cweb_k	15	3	2	comment-overflow	6	19	19	
⇒ <i>cweb-comment</i>				State: 18 state type: <i>r</i>				
← rule	→ R#	sr#	Po	← subrule element	→ Brn	Gto	Red	LA
t Rdirective_cweb_k	15	2	3		6	0	18	3

\Rightarrow <i>comment-overflow</i>				State: 19 state type: r			
\leftarrow	rule	\rightarrow	R# sr# Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
t	Rdirective_cweb_k		15 3 3				6 0 19 3
\Rightarrow <i>Rdirective_cweb_k</i>				State: 20 state type: s/r			
\leftarrow	rule	\rightarrow	R# sr# Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
c	Rlint		13 2 1	ϵ			20 0 20 3
c	Rlint		13 1 1	lint NS_lint_balls::TH_lint_balls			20 12 13
t	Rmust_directive_phrase		4 1 2	Rlint <u>Rmust_directive</u>			6 21 27
\Rightarrow <i>Rlint</i>				State: 21 state type: s			
\leftarrow	rule	\rightarrow	R# sr# Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
c	Rmust_directive		5 7 1	?			21 48 48
c	Rmust_directive		5 1 1	# user-declaration NS_identifer::TH_identifer			21 49 51
c	Rmust_directive		5 4 1	# destructor NULL			21 49 53
c	Rmust_directive		5 3 1	# constructor NULL			21 49 52
c	Rmust_directive		5 5 1	# op NULL			21 49 54
c	Rmust_directive		5 6 1	? NULL			21 49 50
c	Rmust_directive		5 2 1	# user-implementation NULL			21 49 55
t	Rmust_directive_phrase		4 1 3	Rmust_directive <u>Rsyntax_code</u>			6 22 27
\Rightarrow <i>Rmust_directive</i>				State: 22 state type: s			
\leftarrow	rule	\rightarrow	R# sr# Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
c	Rsyntax_code		12 2 1	? NULL			22 23 24
c	Rsyntax_code		12 1 1	syntax-code NS_o2_sdc::TH_o2_sdc			22 23 25
t	Rmust_directive_phrase		4 1 4	Rsyntax_code <u>Rlintϵ</u>			6 26 27
\Rightarrow <i> arbitration-code: ϵ</i>				State: 23 state type: s			
\leftarrow	rule	\rightarrow	R# sr# Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
t	Rsyntax_code		12 2 2	?			22 24 24
t	Rsyntax_code		12 1 2	syntax-code			22 25 25
\Rightarrow <i> ? </i>				State: 24 state type: r			
\leftarrow	rule	\rightarrow	R# sr# Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
t	Rsyntax_code		12 2 3				22 0 24 5
\Rightarrow <i>rsyntax-code</i>				State: 25 state type: r			
\leftarrow	rule	\rightarrow	R# sr# Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
t	Rsyntax_code		12 1 3				22 0 25 5
\Rightarrow <i>Rrsyntax_code</i>				State: 26 state type: s/r			
\leftarrow	rule	\rightarrow	R# sr# Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
c	Rlint		13 2 1	ϵ			26 0 26 5
c	Rlint		13 1 1	lint NS_lint_balls::TH_lint_balls			26 12 13
t	Rmust_directive_phrase		4 1 5	Rlint			6 27 27
\Rightarrow <i>Rlint</i>				State: 27 state type: r			
\leftarrow	rule	\rightarrow	R# sr# Po	\leftarrow	subrule element	\rightarrow	Brn Gto Red LA
t	Rmust_directive_phrase		4 1 6				6 0 27 5
\Rightarrow <i> arbitration-code: ϵ</i>				State: 28 state type: s			

←	rule	→	R#	sr#	Po	←	subrule element	→	Brn	Gto	Red	LA
t	Rdirective		11	6	2		?		7	29	29	
t	Rdirective		11	1	2		# user-declaration		7	30	30	
t	Rdirective		11	3	2		# constructor		7	31	31	
t	Rdirective		11	4	2		# destructor		7	32	32	
t	Rdirective		11	5	2		# op		7	33	33	
t	Rdirective		11	2	2		# user-implementation		7	34	34	
t	Rcweb_k		16	1	2		cweb-comment		7	35	35	
t	Rcweb_k		16	2	2		comment-overrun		7	36	36	
⇒ ? State: 29 state type: <i>r</i>												
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn	Gto	Red	LA
t	Rdirective		11	6	3				7	0	29	6
⇒#user-declaration State: 30 state type: <i>r</i>												
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn	Gto	Red	LA
t	Rdirective		11	1	3				7	0	30	6
⇒#constructor State: 31 state type: <i>r</i>												
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn	Gto	Red	LA
t	Rdirective		11	3	3				7	0	31	6
⇒#destructor State: 32 state type: <i>r</i>												
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn	Gto	Red	LA
t	Rdirective		11	4	3				7	0	32	6
⇒#op State: 33 state type: <i>r</i>												
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn	Gto	Red	LA
t	Rdirective		11	5	3				7	0	33	6
⇒#user-implementation State: 34 state type: <i>r</i>												
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn	Gto	Red	LA
t	Rdirective		11	2	3				7	0	34	6
⇒cweb-comment State: 35 state type: <i>r</i>												
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn	Gto	Red	LA
t	Rcweb_k		16	1	3				7	0	35	6
⇒comment-overrun State: 36 state type: <i>r</i>												
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn	Gto	Red	LA
t	Rcweb_k		16	2	3				7	0	36	6
⇒Rmaybe_directive_phrases State: 37 state type: <i>s/r</i>												
←	rule	→	R#	sr#	Po	←	subrule element	→	Brn	Gto	Red	LA
t	Rmaybe_more_directives		7	2	2				7	0	37	4
c	Rdirective		11	2	1		# user-implementation NULL		37	28	34	
c	Rdirective		11	4	1		# destructor NULL		37	28	32	
c	Rdirective		11	6	1		? NULL		37	28	29	
c	Rcweb_k		16	1	1		cweb-comment NS_cweb_or_c_k::TH_cweb_or_c_k		37	28	35	
c	Rdirective		11	1	1		# user-declaration NS_identifier::TH_identifier		37	28	30	
c	Rdirective		11	3	1		# constructor NULL		37	28	31	
c	Rdirective		11	5	1		# op NULL		37	28	33	

c	Rcweb_k	16	2	1	comment-overrun NULL		37	28	36				
t	Rmaybe_directive_phrases	8	2	2	Rmaybe_directive_phrase		7	38	38				
c	Rmaybe_directive_phrase	9	2	1	Rdirective <u>Rsyntax_code</u>		37	39	41				
c	Rmaybe_directive_phrase	9	1	1	Rcweb_k <u>Rlint^ε</u> <u>Rdirective</u>		37	42	46				
⇒ <u>Rmaybe_directive_phrase</u>						State: 38 state type: <i>r</i>							
←	rule	→	R#	sr#	Po	←	subrule	element	→	Brn	Gto	Red	LA
t	Rmaybe_directive_phrases		8	2	3					7	0	38	5
⇒ <u>Rdirective</u>						State: 39 state type: <i>s</i>							
←	rule	→	R#	sr#	Po	←	subrule	element	→	Brn	Gto	Red	LA
c	Rsyntax_code		12	2	1	? NULL				39	23	24	
c	Rsyntax_code		12	1	1	syntax-code NS_o2_sdc::TH_o2_sdc				39	23	25	
t	Rmaybe_directive_phrase		9	2	2	Rsyntax_code <u>Rlint^ε</u>				37	40	41	
⇒ <u>Rsyntax_code</u>						State: 40 state type: <i>s/r</i>							
←	rule	→	R#	sr#	Po	←	subrule	element	→	Brn	Gto	Red	LA
c	Rlint		13	2	1	ε				40	0	40	5
c	Rlint		13	1	1	lint NS_lint_balls::TH_lint_balls				40	12	13	
t	Rmaybe_directive_phrase		9	2	3	Rlint				37	41	41	
⇒ <u>Rlint</u>						State: 41 state type: <i>r</i>							
←	rule	→	R#	sr#	Po	←	subrule	element	→	Brn	Gto	Red	LA
t	Rmaybe_directive_phrase		9	2	4					37	0	41	5
⇒ <u>Rcweb_k</u>						State: 42 state type: <i>s/r</i>							
←	rule	→	R#	sr#	Po	←	subrule	element	→	Brn	Gto	Red	LA
c	Rlint		13	2	1	ε				42	0	42	6
c	Rlint		13	1	1	lint NS_lint_balls::TH_lint_balls				42	12	13	
t	Rmaybe_directive_phrase		9	1	2	Rlint <u>Rdirective</u>				37	43	46	
⇒ <u>Rlint</u>						State: 43 state type: <i>s</i>							
←	rule	→	R#	sr#	Po	←	subrule	element	→	Brn	Gto	Red	LA
c	Rdirective		11	2	1	# user-implementation NULL				43	56	34	
c	Rdirective		11	4	1	# destructor NULL				43	56	32	
c	Rdirective		11	6	1	? NULL				43	56	29	
c	Rdirective		11	1	1	# user-declaration NS_identifier::TH_identifier				43	56	30	
c	Rdirective		11	3	1	# constructor NULL				43	56	31	
c	Rdirective		11	5	1	# op NULL				43	56	33	
t	Rmaybe_directive_phrase		9	1	3	Rdirective <u>Rsyntax_code</u>				37	44	46	
⇒ <u>Rdirective</u>						State: 44 state type: <i>s</i>							
←	rule	→	R#	sr#	Po	←	subrule	element	→	Brn	Gto	Red	LA
c	Rsyntax_code		12	2	1	? NULL				44	23	24	
c	Rsyntax_code		12	1	1	syntax-code NS_o2_sdc::TH_o2_sdc				44	23	25	
t	Rmaybe_directive_phrase		9	1	4	Rsyntax_code <u>Rlint^ε</u>				37	45	46	
⇒ <u>Rsyntax_code</u>						State: 45 state type: <i>s/r</i>							
←	rule	→	R#	sr#	Po	←	subrule	element	→	Brn	Gto	Red	LA
c	Rlint		13	2	1	ε				45	0	45	5
c	Rlint		13	1	1	lint NS_lint_balls::TH_lint_balls				45	12	13	
t	Rmaybe_directive_phrase		9	1	5	Rlint				37	46	46	

\Rightarrow <i>Rlint</i>		State: 46 state type: <i>r</i>	
← rule → R# sr# Po ←	subrule element	→ Brn Gto Red LA	
t Rmaybe_directive_phrase 9 1 6		37 0 46 5	
\Rightarrow <i>Rmaybe_directive_phrase</i>		State: 47 state type: <i>r</i>	
← rule → R# sr# Po ←	subrule element	→ Brn Gto Red LA	
t Rmaybe_directive_phrases 8 1 2		7 0 47 5	
\Rightarrow <i> ? </i>		State: 48 state type: <i>r</i>	
← rule → R# sr# Po ←	subrule element	→ Brn Gto Red LA	
t Rmust_directive 5 7 2		21 0 48 6	
\Rightarrow <i> arbitration-code: ϵ</i>		State: 49 state type: <i>s</i>	
← rule → R# sr# Po ←	subrule element	→ Brn Gto Red LA	
t Rmust_directive 5 6 2 <i> ? </i>		21 50 50	
t Rmust_directive 5 1 2 <i># user-declaration</i>		21 51 51	
t Rmust_directive 5 3 2 <i># constructor</i>		21 52 52	
t Rmust_directive 5 4 2 <i># destructor</i>		21 53 53	
t Rmust_directive 5 5 2 <i># op</i>		21 54 54	
t Rmust_directive 5 2 2 <i># user-implementation</i>		21 55 55	
\Rightarrow <i> ? </i>		State: 50 state type: <i>r</i>	
← rule → R# sr# Po ←	subrule element	→ Brn Gto Red LA	
t Rmust_directive 5 6 3		21 0 50 6	
\Rightarrow <i>#user-declaration</i>		State: 51 state type: <i>r</i>	
← rule → R# sr# Po ←	subrule element	→ Brn Gto Red LA	
t Rmust_directive 5 1 3		21 0 51 6	
\Rightarrow <i>#constructor</i>		State: 52 state type: <i>r</i>	
← rule → R# sr# Po ←	subrule element	→ Brn Gto Red LA	
t Rmust_directive 5 3 3		21 0 52 6	
\Rightarrow <i>#destructor</i>		State: 53 state type: <i>r</i>	
← rule → R# sr# Po ←	subrule element	→ Brn Gto Red LA	
t Rmust_directive 5 4 3		21 0 53 6	
\Rightarrow <i>#op</i>		State: 54 state type: <i>r</i>	
← rule → R# sr# Po ←	subrule element	→ Brn Gto Red LA	
t Rmust_directive 5 5 3		21 0 54 6	
\Rightarrow <i>#user-implementation</i>		State: 55 state type: <i>r</i>	
← rule → R# sr# Po ←	subrule element	→ Brn Gto Red LA	
t Rmust_directive 5 2 3		21 0 55 6	
\Rightarrow <i> arbitration-code: ϵ</i>		State: 56 state type: <i>s</i>	
← rule → R# sr# Po ←	subrule element	→ Brn Gto Red LA	
t Rdirective 11 6 2 <i> ? </i>		43 29 29	
t Rdirective 11 1 2 <i># user-declaration</i>		43 30 30	
t Rdirective 11 3 2 <i># constructor</i>		43 31 31	
t Rdirective 11 4 2 <i># destructor</i>		43 32 32	

t Rdirective	11	5	2	# op	43	33	33
t Rdirective	11	2	2	# user-implementation	43	34	34

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rule_lhs_phrase Grammar

Date: January 2, 2015 at 15:39

File: rule_lhs_phrase.lex Ns: NS_rule_lhs_phrase

Version: 1.0

Debug: false

Grammar Comments:

Type: Thread

Parse a rule's "lhs" directive.

1 element(s) in Lookahead Expression below

eolr

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