### §1 test\_called\_thd\_fs Grammar

## 1. *test\_called\_thd\_fs* grammar.

Test out the transience of called threads and native first sets.  $O_2$ 's ".fsc" file tells the tale. Here's an excerp where Start rule is  $\epsilon$  caused by Rc. Note the common prefix Ra to see if the transience goes through the called threads and T first set. And so it does:

list-of-native-first-set-terminals 3 LR1\_eolr raw\_c raw\_e end-list-of-native-first-set-terminals list-of-transitive-threads 3 NSa::THa NSb::THb NSd::THd end-list-of-transitive-threads

### 2. Fsm Ctest\_called\_thd\_fs class.

**3.**RSt**rule.** 

 $\mathtt{RSt}$ 



### 4. RS rule.

RS



5. Ra rule.

Ra



**6.** *Rb* **rule.** 

Rb



- $2 \quad RC \text{ RULE}$
- 7. *Rc* rule.

Rc



8. *Rd* rule.

Rd





Re

```
10 test_called_thd_fs Grammar
```

# 10. First Set Language for $O_2^{linker}$ .

```
/*
File: test_called_thd_fs.fsc
Date and Time: Mon Sep 15 20:09:17 2014
*/
transitive y
grammar-name "test_called_thd_fs"
name-space "NS_test_called_thd_fs"
thread-name "TH_test_called_thd_fs"
monolithic n
            "test_called_thd_fs.fsc"
file-name
no-of-T
            569
list-of-native-first-set-terminals 3
  raw_c
  raw_e
  raw_z
end-list-of-native-first-set-terminals
list-of-transitive-threads 3
  NSb::THb
  NSd::THd
  NSa::THa
end-list-of-transitive-threads
list-of-used-threads 3
  NSa::THa
  NSb::THb
  NSd::THd
end-list-of-used-threads
fsm-comments
"test the transience"
```

## 4 LR1 STATE NETWORK

## 11. Lr1 State Network.

$\Rightarrow \qquad \leftarrow \\ c Ra \\ c Ra \\ c RSt \\ c RS $	rule	$\rightarrow$	R# 3 3 1 2 2	<b>sr#</b> 1 2 1 1 2	Po 1 1 1 1 1	$\leftarrow \\ \epsilon \\       a \text{ NSa:::T} \\ \text{RS} \\ \text{Ra} \ \underline{Rb^{\epsilon}} \ \underline{Rc^{\epsilon}} \\ \text{Ra} \ \underline{Rd^{\epsilon}} \ \underline{Re} \\ \end{cases}$		-	$\rightarrow$	<b>Brn</b> 1 1 1 1 1	Gto 0 2 4 5 5	Red 1 3 4 11 14	<b>LA</b> 1
$ \begin{array}{c} \Rightarrow       \\ \leftarrow \\ t Ra \end{array} $	rule	$\rightarrow$	R# 3	sr# 2	Ро 2	← a	State: 2 state ty subrule el		$\rightarrow$	Brn 1	Gto 3	$\operatorname{\mathtt{Red}}_3$	LA
$\Rightarrow^a \leftarrow t Ra$	rule	$\rightarrow$	R# 3	sr# 2	Ро 3		State: 3 state ty subrule el		$\rightarrow$	Brn 1	Gto O	Red 3	LA 1
$\Rightarrow^{RS} \\ \leftarrow \\ t RSt$	rule	$\rightarrow$	R# 1	sr# 1	Ро 2		State: 4 state ty subrule el		$\rightarrow$	Brn 1	Gto O	Red 4	<b>LA</b> 2
$\Rightarrow^{Ra}$ $\leftarrow$ c Rd c Rb c Rd c Rb t RS t RS	rule	$\rightarrow$	R# 6 4 6 4 2 2	sr# 1 2 2 1 2	Po 1 1 1 2 2	$\leftarrow \\ \epsilon \\ \epsilon \\          d  \text{NSd:::T} \\       b  \text{NSb:::T} \\ \text{Rb}  \underline{Rc^{\epsilon}} \\ \text{Rd}  \underline{Re} \\ \end{cases}$			$\rightarrow$	Brn 5 5 5 5 1 1	Gto 0 6 6 9 12	Red 5 5 8 7 11 14	LA 3 4
$\Rightarrow       \leftarrow t Rb t Rd$	rule	$\rightarrow$	R# 4 6	sr# 2 2	Po 2 2	← b d	State: 6 state ty subrule el		$\rightarrow$	Brn 5 5	Gto 7 8	Red 7 8	LA
$\begin{array}{c}\Rightarrow^{b}\\\leftarrow\\ t \ \mathrm{Rb}\end{array}$	rule	$\rightarrow$	<b>R#</b> 4	sr# 2	Ро 3		State: 7 state t subrule el		$\rightarrow$	Brn 5		Red 7	
$\Rightarrow^d \leftarrow t \operatorname{Rd}$	rule	$\rightarrow$	R# 6	sr# 2	Ро 3		State: 8 state ty subrule el	-	$\rightarrow$	Brn 5	Gto O	Red 8	LA 3
$\Rightarrow^{Rb} \leftarrow \\ c \ Rc \\ c \ Rc \\ t \ RS$	rule	$\rightarrow$	R# 5 5 2	sr# 1 2 1	Po 1 1 3		State: 9 state t subrule el	· •	$\rightarrow$	Brn 9 9 1	0 10	9	LA 2
$\Rightarrow^{c} \leftarrow$	rule	$\rightarrow$	R#	sr#	Ро		State: 10 state subrule el		$\rightarrow$	Brn	Gto	Red	LA

$\S{11}$	11 test_called_thd_fs Grammar									LR1 STATE NETWORK			
t Rc			5	2	2				9	0	10	2	
$\Rightarrow^{Rc} \\ \leftarrow \\ t RS$	rule	$\rightarrow$	R# 2	<b>sr#</b> 1	<b>Po</b> 4	$\leftarrow$	State: 11 state type: <sup>r</sup> subrule element	$\rightarrow$	Brn 1	Gto O	Red 11		
$\Rightarrow^{Rd} \leftarrow \\ c Re \\ t RS$	rule	$\rightarrow$	R# 7 2	sr# 1 2	Po 1 3	$\leftarrow$ e Re	State: 12 state type: <sup>s</sup> subrule element	$\rightarrow$	<b>Brn</b> 12 1		<b>Red</b> 13 14	LA	
$\Rightarrow^{e} \leftarrow t \operatorname{Re}$	rule	$\rightarrow$	R# 7	sr# 1	Ро 2	$\leftarrow$	State: 13 state type: <sup>r</sup> subrule element	$\rightarrow$	Brn 12		Red 13		
$\begin{array}{c}\Rightarrow^{Re}\\\leftarrow\\\mathrm{t}\ \mathrm{RS}\end{array}$	rule	$\rightarrow$	R# 2	sr# 2	<b>Po</b> 4	$\leftarrow$	State: 14 state type: <sup>r</sup> subrule element	$\rightarrow$	Brn 1	Gto O	Red	LA 2	

6 INDEX

12. Index.

 $\epsilon$  : 5, 6, 7, 8. |||: 5, 6, 8. NSa::THa: 5. NSb::THb: 6. NSd::THd: 8. Ra: 4.  $Ra: \underline{5}.$ Rb: 4.  $Rb: \underline{\mathbf{6}}.$ Rc: 4.  $Rc: \underline{7}.$ Rd:  $\overline{4}$ .  $Rd: \underline{8}.$ Re: 4.  $Re: \underline{9}.$ RS: 3.  $\mathtt{RS:} \quad \underline{4}.$  $RSt: \underline{3}.$  $test\_called\_thd\_fs: 1.$ 

# test\_called\_thd\_fs Grammar

# Date: September 16, 2014 at 15:02

File: test\_called\_thd\_fs.lex Ns: NS\_test\_called\_thd\_fs

Version: 1.0

Debug: true

Grammar Comments:

Type: Thread

Section Page

test the transience

# 1 element(s) in Lookahead Expression below

 $\mathbf{Z}$ 

test_called_thd_fs grammar 1	1
Fsm Ctest_called_thd_fs class	1
RSt rule	1
<b>RS</b> rule	1
Ra rule	1
Rb rule	1
Rc rule	2
<i>Rd</i> rule	2
$Re$ rule $\ldots \ldots \ldots \ldots \ldots $	2
First Set Language for $O_2^{linker}$ 10	3
Lr1 State Network 11	4
Index	6