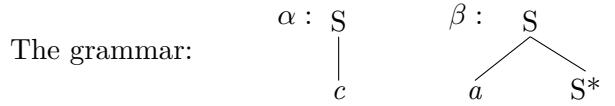


Parsing Beyond CFG

Earley Recognition for TAG: Example

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Input word: *ac*

Item	dotted tree	rule
$[\alpha, \epsilon, la, 0, -, -, 0, 0]$	$\begin{array}{c} \bullet S \\ \\ c \end{array}$	Initialize
$[\beta, \epsilon, la, 0, -, -, 0, 0]$	$\begin{array}{cc} \bullet S & \\ \diagdown & \diagup \\ a & S^* \end{array}$	PredictAdjoinable
$[\beta, \epsilon, lb, 0, -, -, 0, 0]$	$\begin{array}{cc} \bullet S & \\ \diagdown & \diagup \\ a & S^* \end{array}$	PredictNoAdj
$[\beta, 1, la, 0, -, -, 0, 0]$	$\begin{array}{cc} S & \\ \bullet a & S^* \end{array}$	MoveDown
$[\beta, 1, ra, 0, -, -, 1, 0]$	$\begin{array}{cc} S & \\ a^\bullet & S^* \end{array}$	ScanTerm
$[\beta, 2, la, 0, -, -, 1, 0]$	$\begin{array}{cc} S & \\ a & \bullet S^* \end{array}$	MoveRight
$[\beta, 2, lb, 1, -, -, 1, 0]$	$\begin{array}{cc} S & \\ a & \bullet S^* \end{array}$	PredictNoAdj
$[\alpha, \epsilon, lb, 1, -, -, 1, 0]$	$\begin{array}{c} \bullet S \\ \\ c \end{array}$	PredictAdjoined
$[\alpha, 1, la, 1, -, -, 1, 0]$	$\begin{array}{c} S \\ \bullet c \end{array}$	MoveDown
$[\alpha, 1, ra, 1, -, -, 2, 0]$	$\begin{array}{c} S \\ \bullet c \end{array}$	ScanTerm
$[\alpha, \epsilon, rb, 1, -, -, 2, 0]$	$\begin{array}{c} S_\bullet \\ \\ c \end{array}$	MoveUp
$[\beta, 2, rb, 1, 1, 2, 2, 0]$	$\begin{array}{cc} S & \\ \diagdown & \diagup \\ a & S^* \bullet \end{array}$	CompleteFoot
$[\beta, 2, ra, 0, 1, 2, 2, 0]$	$\begin{array}{cc} S & \\ \diagdown & \diagup \\ a & S^{*\bullet} \end{array}$	CompleteNode
$[\beta, \epsilon, rb, 0, 1, 2, 2, 0]$	$\begin{array}{cc} S_\bullet & \\ \diagdown & \diagup \\ a & S^* \end{array}$	MoveUp
$[\beta, \epsilon, ra, 0, 1, 2, 2, 0]$	$\begin{array}{cc} S_\bullet & \\ \diagdown & \diagup \\ a & S^* \end{array}$	CompleteNode
$[\alpha, \epsilon, rb, 0, -, -, 2, 1]$	$\begin{array}{c} S_\bullet \\ \\ c \end{array}$	Adjoin
$[\alpha, \epsilon, ra, 0, -, -, 2, 0]$	$\begin{array}{c} S^\bullet \\ \\ c \end{array}$	CompleteNode