

The function $pop(u, i, z)$

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 $pop(u, i, z)$  {  
  if ( $u \neq u_0$ ) {  
    let  $(L, k)$  be the label of  $u$   
    add  $(u, z)$  to  $\mathcal{P}$   
    for each edge  $(u, w, v)$  {  
      let  $y$  be the node returned by  $getNodeP(L, w, z)$   
      add $(L, v, i, y)$  } } }
```

$pop(u, i, z)$ takes a GSS node u , an integer i and an SPPF node z . It is always called on the current GSS node, input position and SPPF node, $pop(c_U, c_I, c_N)$.

Descriptors (L, v, i, y) are created, where L is the label on u (the current stack top label) and v is a child of u (so v will be the new stack top when the descriptor is processed). If w is the label of the edge from u to v , an SPPF node, y , with packed node child labelled L and grandchildren w and z is created. This becomes the current SPPF node when the descriptor is processed.

We record the pair (u, z) in the set \mathcal{P} so that if, at a later stage, an additional edge is added to u , then this pop action can be applied down the new edge.

The node u is not popped if it is the base node, u_0 , of the GSS.