Dror Bar-Natan: Academic Pensieve: 2017-03:

Scratch

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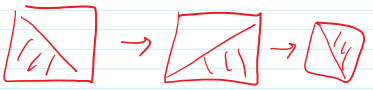
$\begin{pmatrix} a & b \\ 0 & 0 \end{pmatrix} \longrightarrow$ w c u b / a b c d / 0 0 0 0 / 0 0 a b / 0 0 0 0

$[w,c]=w$

[



a_1a_2	a_1b_1	$a_1c_1+c_2a_1$	$a_2d_1+c_2b_1$	a_2	b_2	c_2	d_2
0	0	0	0	0	0	0	0
				0	0	a_2	b_2
0	0	0	0	0	0	0	0

a_1	b_1	c_1	d_1	a_1a_2	a_1b_2	$a_1c_2+c_1a_2$	$a_1d_2+c_1b_2$
0	0	0	0	0	0	0	0
0	0	a_1	b_1				
0	0	0	0	0	0	0	0

a b c d / 0 0 0 0 / 0 0 a 0 / 0 0 b 0 $\longrightarrow$ a b d c / 0 0 0 0 / 0 0 0 b / 0 0 0 a

$$\mathfrak{g}_1 \supset \langle b, u, w, \epsilon b, \epsilon c, \epsilon u, \epsilon w\rangle \supset \langle b, \epsilon b, \epsilon c, \epsilon u, \epsilon w\rangle \supset \mathcal{O}$$

c u w b, εb, εc, εu, εw

$[c,w]=w \Rightarrow [c,f(w)] = w\partial_w f$

$[c,t^{\alpha w}] = \alpha w t^{\alpha w}$

$ad_c\, t^{\alpha w} = \alpha w t^{\alpha w}$

$ad_{\gamma c}\, t^{\alpha w} = \gamma\alpha w t^{\alpha w}$

$Ad_{\gamma c} w = e^{\gamma} w$

$Ad_{\gamma c} f(w) = f(e^{\gamma} w)$

$Ad_{\gamma c}\, t^{\alpha w} = e^{\gamma\alpha w}$

Does 1PI have a meaning in our context?

$bc+uw \longrightarrow$