POINTS	
Coordinates in $G_2(q)$	Coordinates in $PG(6,q)$
(∞)	$(1,0,0,0,0,0,0)$
(a)	$(a,0,0,0,0,0,1)$
(k,b)	$(b,0,0,0,0,1,-k)$
(a,l,a')	$(-l-aa',1,0,-a,0,a^2,-a')$
(k,b,k',b')	$(k'+bb',k,1,b,0,b',b^2-b'k)$
(a,l,a',l',a'')	$(-al'+a'^2+a''l+aa'a'',-a'',-a,-a'+aa'',$ $1,l+2aa'-a^2a'',-l'+a'a'')$

LINES	
Coordinates in $G_s(q)$	Coordinates in $PG(6,q)$
$[\infty]$	$\langle(1,0,0,0,0,0,0),(0,0,0,0,0,0,1)\rangle$
$[k]$	$\langle(1,0,0,0,0,0,0),(0,0,0,0,0,1,-k)\rangle$
$[a,l]$	$\langle(a,0,0,0,0,0,1),(-l,1,0,-a,0,a^2,0)\rangle$
$[k,b,k']$	$\langle(b,0,0,0,0,1,-k),(k',k,1,b,0,0,b^2)\rangle$
$[a,l,a',l']$	$\langle(-l-aa',1,0,-a,0,a^2,-a'),$ $(-al'+a'^2,0,-a,-a',1,l+2aa',-l')\rangle$
$[k,b,k',b',k'']$	$\langle(k'+bb',k,1,b,0,b',b^2-b'k),$ $(b'^2+k''b,-b,0,-b',1,k'',-kk''-k'-2bb')\rangle$

Table 1: Coordinatization of $G_2(q)$.

POINTS	
Coordinates in ${}^3D_4(q)$	Coset in Q (or other element)
(∞)	(∞)
(a)	$A_4(\infty).(a,0,0,0,0)$
(k,b)	$A_4(k).(0,0,0,0,b)$
(a,l,a')	$A_2(\infty).(a,-l,a',0,0)$
(k,b,k',b')	$A_2(k).(0,0,b',k',b)^k$
(a,l,a',l',a'')	$(a,-l,a'+aa'+\mathrm{Tr}(ll'),l',a'')$

LINES	
Coordinates in $G_s(q)$	Cosets in Q (or other element)
$[\infty]$	∞
$[k]$	k
$[a,l]$	$A_3(\infty).(a,-l,0,0,0)$
$[k,b,k']$	$A_3(k).(0,0,0,k',b)^k$
$[a,l,a',l']$	$A_1(\infty).(a,-l,a'+\mathrm{Tr}(ll'),l',0)$
$[k,b,k',b',k'']$	$A_1(k).(0,-k'',b',k',b)^k$

Table 2: Coordinatization of ${}^3D_4(q)$.