



Values derived for the Force Design Elements from the Ranked Tree for a South African Military Strategy

The determination of the degree to which a particular force design element contributes to the military strategy relative to the other force design elements, w_f is

$$w_f = \sum_{\delta \in M_5(f)} \tilde{v}_{\langle \delta \rangle}$$

where f is the particular force design element to be considered and M_5 is the set of all the force design elements or the force design at the level of abstraction where $\mu(v) = 5$.

The various w_f that were calculated from the various $v_{\langle \varphi \rangle}$ determined from the ranked tree defined in Appendix B are reported below.

Serial	Force Design Element	w_f
	a	b
1	Aircraft Air Early Warning	0.005424
2	Aircraft Battlefield Support	0.002070
3	Aircraft Command and Control	0.000575
4	Aircraft Electronic Warfare	0.004385
5	Aircraft In-flight Refuelling	0.001478
6	Aircraft Light Fighter	0.010400
7	Aircraft LRMP	0.028899

Appendix C

Serial	Force Design Element	w_f
	a	b
8	Aircraft Swing Role Fighter	0.058682
9	Aircraft Transport Medium	0.007435
10	Aircraft Transport Medium Heavy	0.028530
11	Aircraft Transport Medium Light	0.004150
12	Armoured Car	0.007424
13	Armoured Car Reconnaissance	0.008091
14	Army Territorial Reserve	0.004613
15	Artillery Light	0.003160
16	Artillery Medium Rocket Launcher	0.009920
17	Artillery Self Propelled Medium Howitzer	0.018873
18	Artillery Towed Medium Howitzer	0.015311
19	Band Army	0.000433
20	Band Navy	0.000433
21	Band SAAF	0.000433
22	Band SAMHS	0.000433
23	Ceremonial Guns	0.000217
24	Command and Control Warfare FDE	0.011194
25	Conventional Medical FDE	0.024951
26	Electronic Warfare FDE	0.021278
27	Engineers Air Land	0.003227
28	Engineers Construction	0.017940
29	Engineers Field	0.023883
30	Engineers Support	0.001134
31	Engineers Terrain Intelligence	0.000450
32	Fast Attack Craft Missile	0.021757
33	Field Workshop	0.002150
34	Frigate Small Guided Missile	0.058241
35	GBADS Air Landed	0.003629
36	GBADS Mechanised	0.010317
37	GBADS Mobile	0.014716
38	Harbour Protection Boat	0.001964
39	Helicopter Attack Land	0.005176
40	Helicopter Attack Maritime	0.007779
41	Helicopter Land Attack	0.001533
42	Helicopter Transport Medium	0.017323
43	Helicopter Utility Light	0.005430
44	HQ Operational Level	0.029269
45	HQ Strategic Level	0.026480
46	HQ Tactical Level	0.065636
47	Hydrographic Survey Vessel	0.010575
48	Infantry Mechanised	0.038520
49	Infantry Motorised	0.066479
50	Infantry Parachute	0.016614
51	Infantry Special	0.004739
52	Information Based Warfare FDE	0.005886

Serial	Force Design Element	w_f
	a	b
53	Information Infrastructure Warfare FDE	0.005886
54	Inshore Patrol Vessel	0.001964
55	Intelligence Tactical Land	0.002144
56	Main Battle Tank	0.016252
57	Maintenance Unit	0.002122
58	Military Hospital	0.005987
59	Military Police	0.003202
60	Mine Countermeasure Vessel	0.003987
61	NBC Defence FDE	0.017161
62	Net Warfare FDE	0.006464
63	Operational Diving Team	0.002219
64	Presidential Aircraft	0.007870
65	Presidential Health Support Unit	0.005363
66	Psychological Warfare FDE	0.014191
67	Replenishment Ship	0.026886
68	Road Transport FDE	0.012949
69	SAAF Protection FDE	0.002654
70	Saluting Stations	0.000217
71	Satellite and Photographic Reconnaissance FDE	0.006499
72	Sea Lift Ship	0.031850
73	Special Forces Land	0.020238
74	Special Forces Medical Support	0.000635
75	Special Forces Sea	0.018053
76	Submarine Conventional	0.017288
77	Surveillance Radar AD LR 3-D	0.001963
78	Surveillance Radar AD MR 3-D	0.001074
79	Surveillance Radar AD Tactical	0.000504
80	Tactical Airfield Unit	0.004310
81	Tank Transporter	0.002092
82	Transportable Logistic Support	0.002165
83	Unmanned Aerial Vehicle Land	0.005243
84	Unmanned Aerial Vehicle Maritime	0.001280
85	Veterinary Institute	0.009653