A Ranked Tree for a South African Military Strategy

The ranked tree, $M$, for a South African Military Strategy is depicted on the following pages. The tree was developed in the Expert Choice 2000 Professional 10.1, Build 903.05 software package which is licenced to the author. The tree is a left-to-right representation of $M$. The vertices are thus displayed in a top-to-bottom manner. The vertices are not labelled and their associated $v_{(v)}$ is indicated in brackets as $(L: v_{(v)})$. 
Appendix B

Model Name: RANKED TREE FOR A SA MILITARY STRATEGY

Treeview

- A South African Military Strategy
  - South Africa's Sovereignty remains Intact (L: .648)
    - Conduct Military Diplomacy (L: .167)
    - Demonstrate Own Offensive Capabilities (L: .297)
      - Command and Control (L: .056)
        - Aircraft LRMP (L: .333)
        - HQ Tactical Level (L: .667)
      - Indirect Fire (L: .379)
        - Aircraft Light Fighter (L: .087)
        - Aircraft Swing Role Fighter (L: .173)
        - Artillery Light (L: .044)
        - Artillery Medium Rocket Launcher (L: .078)
        - Artillery Self Propelled Medium Howitzer (L: .256)
        - Artillery Towed Medium Howitzer (L: .233)
        - Fast Attack Craft Missile (L: .045)
        - Frigate Small Guided Missile (L: .084)
  - Manoeuvre and Direct Fire (L: .393)
    - Aircraft Light Fighter (L: .029)
    - Aircraft LRMP (L: .072)
    - Aircraft Swing Role Fighter (L: .105)
    - Armoured Car (L: .048)
    - Armoured Car Reconnaissance (L: .048)
    - Fast Attack Craft Missile (L: .031)
    - Frigate Small Guided Missile (L: .126)
    - Helicopter Attack Land (L: .049)
    - Helicopter Attack Maritime (L: .050)
    - Infantry Mechanised (L: .059)
    - Infantry Motorised (L: .024)
    - Infantry Parachute (L: .086)
    - Main Battle Tank (L: .146)
    - Submarine Conventional (L: .127)
  - Protection of Deployed Forces (L: .172)
    - GBADS Air Landed (L: .109)
    - GBADS Mechanised (L: .345)
    - GBADS Mobile (L: .547)
  - Safeguard Diplomatic Personnel (L: .163)
Manoeuvre and Direct Fire (L: .470)
- Aircraft Swing Role Fighter (L: .137)
- Fast Attack Craft Missile (L: .125)
- Frigate Small Guided Missile (L: .341)
- Special Forces Land (L: .091)
- Special Forces Sea (L: .091)
- Submarine Conventional (L: .215)

Protection - Search and Rescue (L: .052)
- Aircraft Transport Medium Heavy (L: .093)
- Fast Attack Craft Missile (L: .060)
- Frigate Small Guided Missile (L: .185)
- Helicopter Attack Maritime (L: .051)
- Infantry Parachute (L: .126)
- Replenishment Ship (L: .080)
- Sea Lift Ship (L: .136)
- Special Forces Land (L: .105)
- Special Forces Medical Support (L: .032)
- Special Forces Sea (L: .086)
- Unmanned Aerial Vehicle Land (L: .047)

Situational Awareness - Information Operations (L: .134)
- Aircraft LRMP (L: .412)
- HQ Operational Level (L: .111)
- HQ Strategic Level (L: .064)
- HQ Tactical Level (L: .412)

Situational Awareness - Reconnaissance, Surveillance and Intelligence (L: .207)
- Aircraft Air Early Warning (L: .111)
- Aircraft Electronic Warfare (L: .099)
- Aircraft LRMP (L: .121)
- Electronic Warfare FDE (L: .110)
- Fast Attack Craft Missile (L: .043)
- Frigate Small Guided Missile (L: .107)
- Helicopter Attack Maritime (L: .042)
- Satellite and Photographic Reconnaissance FDE (L: .180)
- Special Forces Land (L: .052)
- Special Forces Sea (L: .052)
- Submarine Conventional (L: .047)
A Ranked Tree

- HQ Operational Level (L: 0.537)
- HQ Strategic Level (L: 0.099)
- HQ Tactical Level (L: 0.364)

- Situational Awareness - Reconnaissance, Surveillance and Intelligence (L: 0.108)
  - Aircraft Air Early Warning (L: 0.197)
  - Aircraft Electronic Warfare (L: 0.072)
  - Aircraft Light Fighter (L: 0.024)
  - Aircraft Swing Role Fighter (L: 0.041)
  - Electronic Warfare FDE (L: 0.027)
  - Fast Attack Craft Missile (L: 0.024)
  - Frigate Small Guided Missile (L: 0.074)
  - GBADS Air Landed (L: 0.052)
  - GBADS Mechanised (L: 0.073)
  - GBADS Mobile (L: 0.073)
  - Satellite and Photographic Reconnaissance FDE (L: 0.024)
- Special Forces Land (L: 0.030)
- Surveillance Radar AD LR 3-D (L: 0.160)
- Surveillance Radar AD MR 3-D (L: 0.087)
- Surveillance Radar AD Tactical (L: 0.041)

- Sustainment (L: 0.157)
  - Aircraft Battlefield Support (L: 0.033)
  - Aircraft In-flight Refuelling (L: 0.083)
  - Aircraft Transport Medium (L: 0.054)
  - Aircraft Transport Medium Heavy (L: 0.156)
  - Aircraft Transport Medium Light (L: 0.040)
  - Conventional Medical FDE (L: 0.050)
  - Engineers Construction (L: 0.021)
  - Engineers Support (L: 0.024)
  - Helicopter Transport Medium (L: 0.116)
  - Helicopter Utility Light (L: 0.035)
  - Replenishment Ship (L: 0.099)
  - Road Transport FDE (L: 0.026)
  - Sea Lift Ship (L: 0.076)
  - Special Forces Medical Support (L: 0.016)
  - Tactical Airfield Unit (L: 0.170)

- Neutralise Enemy in the Land Battle Space (L: 0.257)
- Command and Control (L: 0.051)
HQ Operational Level (L: .286)
HQ Strategic Level (L: .143)
HQ Tactical Level (L: .571)
Direct Fire and Manoeuvre (L: .181)
Armoured Car (L: .080)
Armoured Car Reconnaissance (L: .080)
Engineers Air Land (L: .027)
Engineers Construction (L: .037)
Engineers Field (L: .049)
Helicopter Attack Land (L: .105)
Infantry Mechanised (L: .149)
Infantry Motorised (L: .065)
Infantry Parachute (L: .143)
Main Battle Tank (L: .266)
Indirect Fire (L: .211)
Aircraft Light Fighter (L: .042)
Aircraft Swing Role Fighter (L: .143)
Artillery Light (L: .090)
Artillery Medium Rocket Launcher (L: .169)
Artillery Self Propelled Medium Howitzer (L: .250)
Artillery Towed Medium Howitzer (L: .194)
Fast Attack Craft Missile (L: .043)
Frigate Small Guided Missile (L: .070)
Lift in the Battlefield (L: .041)
Aircraft Battlefield Support (L: .080)
Aircraft Transport Medium Light (L: .174)
Helicopter Transport Medium (L: .477)
Helicopter Utility Light (L: .270)
Lift in the Theatre of Operations (L: .103)
Aircraft Transport Medium (L: .090)
Aircraft Transport Medium Heavy (L: .320)
Replenishment Ship (L: .100)
Road Transport FDE (L: .208)
Sea Lift Ship (L: .135)
Tank Transporter (L: .146)
Lift Strategic (L: .058)
Aircraft Transport Medium Heavy (L: .225)
Fast Attack Craft Missile (L: .053)
A Ranked Tree

- Frigate Small Guided Missile (L: .067)
- Replenishment Ship (L: .098)
- Road Transport FDE (L: .224)
- Sea Lift Ship (L: .274)
- Submarine Conventional (L: .060)
- Protection - Combat Search and Rescue (L: .021)
  - Aircraft Battlefield Support (L: .042)
  - Aircraft Transport Medium (L: .078)
  - Aircraft Transport Medium Heavy (L: .163)
  - Aircraft Transport Medium Light (L: .057)
  - Armoured Car Reconnaissance (L: .042)
  - Helicopter Transport Medium (L: .199)
  - Helicopter Utility Light (L: .067)
  - Infantry Parachute (L: .036)
  - Special Forces Land (L: .124)
  - Special Forces Sea (L: .094)
  - Unmanned Aerial Vehicle Land (L: .099)
- Protection - Deployed Forces (L: .065)
  - Engineers Air Land (L: .082)
  - Engineers Construction (L: .198)
  - Engineers Field (L: .434)
  - Military Police (L: .174)
  - SAAF Protection FDE (L: .112)
- Protection - Rear Areas (L: .048)
  - Army Territorial Reserve (L: .540)
  - Engineers Field (L: .163)
  - Infantry Motorised (L: .297)
- Situational Awareness - Information Operations (L: .041)
  - HQ Operational Level (L: .230)
  - HQ Strategic Level (L: .122)
  - HQ Tactical Level (L: .648)
- Situational Awareness - Reconnaissance, Surveillance and Intelligence (L: .095)
  - Aircraft Electronic Warfare (L: .063)
  - Armoured Car Reconnaissance (L: .041)
  - Electronic Warfare FDE (L: .047)
  - Engineers Terrain Intelligence (L: .034)
  - Fast Attack Craft Missile (L: .067)
- Helicopter Utility Light (L: .200)
- Lift in the Theatre of Operations (L: .053)
  - Aircraft Transport Medium Heavy (L: .208)
  - Replenishment Ship (L: .661)
  - Sea Lift Ship (L: .131)
- Lift Strategic (L: .046)
  - Aircraft Transport Medium Heavy (L: .200)
  - Replenishment Ship (L: .600)
  - Sea Lift Ship (L: .200)
- Protection - Combat Search and Rescue (L: .036)
  - Aircraft Transport Medium Heavy (L: .104)
  - Fast Attack Craft Missile (L: .093)
  - Frigate Small Guided Missile (L: .226)
  - Helicopter Attack Maritime (L: .062)
  - Helicopter Transport Medium (L: .111)
  - Helicopter Utility Light (L: .079)
  - Operational Diving Team (L: .067)
  - Replenishment Ship (L: .130)
  - Sea Lift Ship (L: .130)
- Protection - Deployed Forces (L: .092)
  - Aircraft Light Fighter (L: .090)
  - Aircraft Swing Role Fighter (L: .229)
  - Fast Attack Craft Missile (L: .102)
  - Frigate Small Guided Missile (L: .219)
  - Helicopter Attack Maritime (L: .066)
  - Mine Countermeasure Vessel (L: .295)
- Protection - Rear Areas (L: .065)
  - Army Territorial Reserve (L: .200)
  - Harbour Protection Boat (L: .400)
  - Inshore Patrol Vessel (L: .400)
- Situational Awareness - Information Operations (L: .057)
  - Aircraft LRMP (L: .277)
  - HQ Operational Level (L: .160)
  - HQ Strategic Level (L: .095)
  - HQ Tactical Level (L: .467)
- Situational Awareness - Reconnaissance, Surveillance and Intelligence (L: .108)
  - Aircraft Air Early Warning (L: .093)
A Ranked Tree

- Conduct Operations iaw the UN Charter (L: .351)
  - Conduct Landward Blockade Operations (L: .113)
    - Command and Control (L: .084)
    - HQ Operational Level (L: .286)
    - HQ Strategic Level (L: .143)
    - HQ Tactical Level (L: .571)
    - Manoeuvre and Direct Fire (L: .546)
      - Infantry Mechanised (L: .435)
      - Infantry Motorised (L: .565)
    - Protection - Deployed Forces (L: .232)
      - Engineers Air Land (L: .163)
      - Engineers Construction (L: .297)
      - Engineers Field (L: .540)
    - Situational Awareness - Reconnaissance, Surveillance and Intelligence (L: .138)
      - Intelligence Tactical Land (L: .386)
      - Satellite and Photographic Reconnaissance FDE (L: .308)
    - Special Forces Land (L: .099)
    - Special Forces Sea (L: .070)
    - Unmanned Aerial Vehicle Land (L: .137)
  - Conduct Maritime Blockade Operations (L: .113)
    - Command and Control (L: .160)
    - Aircraft LRMP (L: .332)
    - HQ Operational Level (L: .160)
    - HQ Strategic Level (L: .090)
    - HQ Tactical Level (L: .417)
    - Manoeuvre and Direct Fire (L: .691)
      - Fast Attack Craft Missile (L: .268)
      - Frigate Small Guided Missile (L: .614)
A Ranked Tree

SANDF’s Obligations Internal to South Africa are Fulfilled (L: .122)
- Support other Government Departments (L: .859)
- Antarctic Operations to support SANAE (L: .099)
  - Command and Control (L: .125)
    - HQ Strategic Level (L: 1.000)
  - Sustainment (L: .875)
    - Frigate Small Guided Missile (L: .084)
    - Hydrographic Survey Vessel (L: .138)
    - Replenishment Ship (L: .232)
    - Sea Lift Ship (L: .546)
- Borderline Control (L: .310)
  - Command and Control (L: .143)
    - HQ Operational Level (L: .172)
    - HQ Strategic Level (L: .102)
    - HQ Tactical Level (L: .726)
  - Manoeuvre and Direct Fire (L: .857)
    - Infantry Mechanised (L: .284)
    - Infantry Motorised (L: .473)
    - Infantry Parachute (L: .170)
    - Infantry Special (L: .073)
- Conduct Search and Rescue within South Africa (L: .099)
  - Command and Control (L: .167)
    - HQ Strategic Level (L: .167)
    - HQ Tactical Level (L: .833)
  - Protection - Combat Search and Rescue (L: .833)
    - Aircraft Transport Medium (L: .074)
    - Aircraft Transport Medium Heavy (L: .122)
    - Aircraft Transport Medium Light (L: .059)
    - Helicopter Transport Medium (L: .236)
    - Helicopter Utility Light (L: .043)
    - Infantry Parachute (L: .085)
    - Special Forces Land (L: .151)
    - Special Forces Sea (L: .123)
A Ranked Tree

- Command and Control (L: .167)
  - HQ Operational Level (L: .179)
  - HQ Strategic Level (L: .113)
  - HQ Tactical Level (L: .709)
- Manoeuvre and Direct Fire (L: .833)
  - Infantry Mechanised (L: .223)
  - Infantry Motorised (L: .309)
  - Infantry Parachute (L: .095)
  - Infantry Special (L: .059)
  - Special Forces Land (L: .176)
  - Special Forces Sea (L: .139)
- Support the President of South Africa (L: .141)
  - Presidential Air Transport (L: .458)
    - Sustainment (L: 1.000)
      - Presidential Aircraft (L: 1.000)
  - Presidential Health Support (L: .416)
    - Sustainment (L: 1.000)
      - Military Hospital (L: .250)
      - Presidential Health Support Unit (L: .750)
  - Presidential Protocol Requirements (L: .126)
    - Sustainment (L: 1.000)
      - Band Army (L: .200)
      - Band Navy (L: .200)
      - Band SAAF (L: .200)
      - Band SAMHS (L: .200)
      - Ceremonial Guns (L: .100)
      - Saluting Stations (L: .100)