WHAT IS CLAIMED

1. A method of controlling a side shift (S) of a compact personal transporter having four load sensors (C1, C2, C3, C4), the method comprising:
   - receiving initial weight values ($D1_0$, $D1_0$, $D3_0$, $D4_0$) of a user from the force sensing elements (C1, C2, C3, C4);
   - receiving actual weight values (D1, D2, D3, D4) of the user from the corresponding force sensing elements (C1, C2, C3, C4);
   - calculating a twist force (T_W) according to the actual weight values (D1, D2, D3, D4) according to equation $T_W=(D1-D2+D3-D4)/4$;
   - receiving an acceleration value (P) from a side drive motor;
   - receiving a gain parameter of the side shift (G_S); and
   - calculating the side shift according to equation $S=(D3+D4-D3_0-D4_0)/2 + T_W P G_S$.

2. A method of controlling a yaw rate (Y) of a compact personal transporter having four force sensing elements (C1, C2, C3, C4), the method comprising:
   - receiving actual weight values (D1, D2, D3, D4) of a user from the force sensing elements (C1, C2, C3, C4);
   - calculating a twist force (T_W) according to the actual weight values (D1, D2, D3, D4) by following equation $T_W=(D1-D2+D3-D4)/4$;
   - receiving velocity values (V1, V2, V3, V4) of four wheels and a distance (d) between a left and right wheels of the compact personal transporter;
   - calculating a centrifugal force F_C according to equation $F_C=T_W(V1+V2)(V1-V2)/(2d)$;
   - receiving a gain value (G_T) of the twist force (T_W);
   - computing the yaw rate (Y) according to equation $Y=T + F_C G_T$.

3. The method of Claim 2 further comprising:
   adding the side shift (S) according to Claim 1.

compared to previous amendments