CLAIMS:

What is claimed is:

1. A method for managing a programmable control panel (132) for a vehicle (102), the method comprising:

assigning a number of first level control functions (130) to the programmable control panel (132) for the vehicle (102); and

assigning a number of second level control functions (134) to the programmable control panel (132) based on a health (136) of programmable control panels (116) in the vehicle (102).

2. The method of claim 1, wherein assigning the number of first level control functions (130) to the programmable control panel (132) in the vehicle (102) comprises:

assigning the number of first level control functions (130) to the programmable control panel (132) in the vehicle (102) based on a location (138) of the programmable control panel (132) in the vehicle (102).

3. The method of claim 1, wherein assigning the number of first level control functions (130) to the programmable control panel (132) in the vehicle (102) comprises:

assigning the number of first level control functions (130) to the programmable control panel (132) in the vehicle (102) prior to the programmable control panel (132) being installed in the vehicle (102).

4. The method of claim 1, wherein assigning the number of first level control functions (130) to the programmable control panel (132) in the vehicle (102) comprises:

assigning the number of first level control functions (130) to the programmable control panel (132) in the vehicle (102) after the programmable control panel (132) is installed in the vehicle (102).

5. The method of claim 1, wherein assigning the number of second level control functions (134) to the programmable control panel (132) based on the health (136) of the programmable control panels (116) in the vehicle (102) comprises:

responsive to a particular programmable control panel in the programmable control panels (116) failing to operate as desired, identifying an associated number of first level control functions for the particular programmable control panel; and

assigning the associated number of first level control functions to the programmable control panel (132) as the number of second level control functions (134) to the programmable control panel (132).

6. The method of claim 1 further comprising:

displaying a user interface (256) for the number of first level control functions (130) and the number of second level control functions (134) on a display device in the programmable control panel (132).

7. The method of claim 5 further comprising:

selecting the programmable control panel (132) for assignment of the number of second level control functions (134) based on a proximity of the programmable control panel (132) to the particular programmable control panel.

8. The method of claim 1, wherein the programmable control panel (132) has a user input system (214) having at least one of a touch screen (232) and programmable physical buttons.

9. The method of claim 1, wherein the vehicle (102) is selected from one of an aircraft, a spacecraft, a surface ship, a submarine, an automobile, a train, and a truck.

10. An apparatus comprising:

a programmable control panel (132) configured to be connected to a vehicle (102); receive a number of first level control functions (130) to the programmable control panel (132) for the vehicle (102); and receive a number of second level control functions (134) to the programmable control panel (132) based on a health (136) of programmable control panels (116) in the vehicle (102).

11. The apparatus of claim 10, wherein the number of second level control functions

(134) is a number of control functions (258) for another programmable control panel failing to operate as desired.

12. The apparatus of claim 11, wherein the number of first level control functions (130) is a number of current first level control functions performed by the programmable control panel (132) and is for controlling a system in the vehicle (102).

13. The apparatus of claim 11, wherein the programmable control panel (132) comprises:

a user input system (214);

a display system (212);

a communication unit (216);

a storage device (208) configured to store software (220) for the number of first level control functions (130) and the number of second level control functions (134); and

a processor unit (206) configured to run the software (220).

14. The apparatus of claim 13, wherein a touch screen (232) forms the user input system (214) and the display system (212).

15. A vehicle system comprising:

a plurality of systems (104); and

programmable control panels (116) configured to control the plurality of systems (104), wherein a programmable control panel (132) in the programmable control panels (116) is configured to perform a number of first level control functions (130) to the programmable control panel (132) for a vehicle (102); and perform a number of second level control functions (134) to the programmable control panel (132) based on a health (136) of the programmable control panels (116) in the vehicle (102).

16. The vehicle system of claim 15 further comprising:

a panel manager (128) configured to assign the number of first level control functions (130) to the programmable control panel (132) and assign the number of second level control functions (134) to the programmable control panel (132) based on the health (136) of the programmable control panels (116).

17. The vehicle system of claim 16, wherein the panel manager (128) is configured to assign the number of first level control functions (130) to the programmable control panel (132) in the vehicle (102) based on a location (138) of the programmable control panel (132) in the vehicle (102).

18. The vehicle system of claim 16, wherein the panel manager (128) is configured to assign the number of second level control functions (134) to the programmable control panel (132) based on a location (138) of the programmable control panel (132) relative to another programmable control panel failing to operate as desired.

19. The vehicle system of claim 16, wherein in being configured to assign the number of second level control functions (134) to the programmable control panel (132) based on the health (136) of the programmable control panels (116), the panel manager (128) is configured to identify an associated number of first level control functions for a particular programmable control panel in response to the particular programmable control panel in the programmable control panels (116) failing to operate as desired and assign the associated number of first level control functions to the programmable control panel (132) and the number of second level control functions (134) to the programmable control panel (132).

20. The vehicle system of claim 15 further comprising:
the vehicle (102), wherein the vehicle (102) is selected from one of an aircraft, a spacecraft, a surface ship, a submarine, an automobile, a train, and a truck.

CLAIMS

1. A method for managing a programmable control panel for a vehicle, the method comprising:

assigning a number of first level control functions to the programmable control panel for the vehicle; and

assigning a number of second level control functions to the programmable control panel based on a health of programmable control panels in the vehicle, such that the programmable control panel is now configured to provide the number of first level control functions and the number of second level control functions, assigning comprising:

responsive to a particular programmable control panel in the programmable control panels failing to operate as desired, identifying an associated number of first level control functions for the particular programmable control panel; and

assigning the associated number of first level control functions to the programmable control panel as the number of second level control functions to the programmable control panel.

2. The method of claim **1**, wherein assigning the number of first level control functions to the programmable control panel in the vehicle comprises:

assigning the number of first level control functions to the programmable control panel in the vehicle based on a location of the programmable control panel in the vehicle.

3. The method of claim **1**, wherein assigning the number of first level control functions to the programmable control panel in the vehicle comprises:

assigning the number of first level control functions to the programmable control panel in the vehicle prior to the programmable control panel being installed in the vehicle.

4. The method of claim **1**, wherein assigning the number of first level control functions to the programmable control panel in the vehicle comprises:

assigning the number of first level control functions to the programmable control panel in the vehicle after the programmable control panel is installed in the vehicle.

5. The method of claim **1** further comprising:

displaying a user interface for the number of first level control functions and the number of second level control functions on a display device in the programmable control panel.

6. The method of claim **1**, further comprising:

selecting the programmable control panel for assignment of the number of second level control functions based on a proximity of the programmable control panel to the particular programmable control panel.

7. The method of claim **1**, wherein the programmable control panel has a user input system having at least one of a touch screen and programmable physical buttons.

8. The method of claim **1**, wherein the vehicle is selected from one of an aircraft, a spacecraft, a surface ship, a submarine, an automobile, a train, and a truck.

9. An apparatus comprising:

a programmable control panel configured to be connected to a vehicle; receive a number of first level control functions to the programmable control panel for the vehicle; and receive a number of second level control functions to the programmable control panel based on a health of programmable control panels in the vehicle, such that the programmable control panel is now configured to

provide the number of first level control functions and the number of second level control functions, wherein the number of second level control functions is an associated number of first level control functions for a second programmable control panel which is failing to operate as desired.

10. The apparatus of claim **9**, wherein the number of first level control functions is a number of current first level control functions performed by the programmable control panel and is for controlling a system in the vehicle.

11. The apparatus of claim **9**, wherein the programmable control panel comprises:

a user input system;

a display system;

a communication unit;

a storage device configured to store software for the number of first level control functions and the number of second level control functions; and

a processor unit configured to run the software.

12. The apparatus of claim **11**, wherein a touch screen forms the user input system and the display system.

13. A vehicle system comprising:

a plurality of systems;

programmable control panels configured to control the plurality of systems, wherein a programmable control panel in the programmable control panels is configured to perform a number of first level control functions and the programmable control panel in the programmable control panels is configured to perform a number of second level control functions based on a health of the programmable control panels in the vehicle; and

a panel manager configured to assign the number of first level control functions to the programmable control panel and assign the number of second level control functions to the programmable control panel based on the health of the programmable control panels, wherein in being configured to assign the number of second level control functions to the programmable control panel based on the health of the programmable control panels, the panel manager is configured to identify an associated number of first level control functions for a particular programmable control panel in response to the particular programmable control panel in the programmable control panels failing to operate as desired and assign the associated number of first level control functions to the programmable control panel and the number of second level control functions to the programmable control panel.

14. The vehicle system of claim **13**, wherein the panel manager is configured to assign the number of first level control functions to the programmable control panel in the vehicle based on a location of the programmable control panel in the vehicle.

15. The vehicle system of claim **13**, wherein the panel manager is configured to assign the number of second level control functions to the programmable control panel based on a location of the programmable control panel relative to another the particular programmable control panel failing to operate as desired.

16. The vehicle system of claim **13** further comprising:

the vehicle, wherein the vehicle is selected from one of an aircraft, a spacecraft, a surface ship, a submarine, an automobile, a train, and a truck.