CLAIMS

What is claimed is:

1. ~~1.~~ A truss with integrated wiring, comprising:

a plurality of chords coupled together with a plurality of support members, wherein at least one chord of the plurality of chords includes a hollow space along a length of the at least one chord of the plurality of chords;

a first set of electrical connectors situated near a first end of the at least one chord of the plurality of chords, wherein the first set of electrical connectors is outside of the hollow space; and

a second set of electrical connectors situated near a second end of the at least one chord of the plurality of chords, wherein the second set of electrical connectors is outside of the hollow space, and wherein the first set of electrical connectors is electrically coupled to the second set of electrical connectors through a set of electrical wires housed in the hollow space~~.~~, wherein no portion of the set of electrical wires is exposed,

~~2. The truss of claim 1,~~and wherein the first set of electrical connectors and the second set of electrical connectors ~~is~~are configured to mate with ~~a third set~~ respective electrical connectors of ~~electrical connectors of a second~~an adjacent truss.

2. ~~3.~~ The truss of ~~claim 1~~, wherein the first set of electrical connectors includes one or more male connectors ~~and the second set of electrical connectors includes one or more female connectors.~~.

3. ~~4.~~ The truss of ~~claim 1~~, wherein the first set of electrical connectors includes at least a first power connector configured to transfer an electrical power, wherein the second set of electrical connectors includes at least a second power connector configured to transfer the electrical power, wherein the set of electrical wires includes a plurality of electrical wires configured for transferring the electrical power, and wherein the at least the first and second power connectors are electrically coupled through the plurality of electrical wires configured for transferring the electrical power.

4. 5. The truss of claim 43, further comprising an access rail, wherein the access rail is coupled to the at least one chord of the plurality of chords and the plurality of electrical wires configured for transferring the electrical power.

5. 6. The truss of claim 54, further comprising an equipment coupled to the truss, wherein the equipment is electrically coupled to the access rail.

6. 7. The truss of claim 65, wherein the equipment is a lighting equipment, a video equipment, or an audio equipment.

7. 8. The truss of claim 65, further comprising a gear track coupled to the access rail, wherein the equipment is coupled to a motorized gear configured to engage the gear track, the motorized gear enabling the equipment to move along the gear track while receiving the electrical power.

8. 9. The truss of claim 1, wherein the first set of electrical connectors includes at least a first connector configured to transfer a data signal, and wherein the second set of electrical connectors includes at least a second connector configured to transfer the data signal.

9. 10. The truss of claim 1, wherein the first set of electrical connectors includes at least a first connector configured to transfer a control signal, and wherein the second set of electrical connectors includes at least a second connector configured to transfer the control signal.

10. 11. The truss of claim 1, wherein the at least one chord of the plurality of chords includes one or more accessibility ports along the length of the at least one chord of the plurality of chords, the one or more accessibility ports including a ~~fourth~~third set of electrical connectors~~,~~ of the ~~fourth~~truss, the third set of electrical connectors of the truss being coupled to the first set of electrical connectors via the set of electrical wires housed in the hollow space.

11. 12. A truss assembly with integrated wiring comprising:

a first truss including a plurality of chords coupled together with a plurality of support members, wherein at least one chord of the plurality of chords includes a hollow space along a length of the at least one chord of the plurality of chords, the first truss further including a first set of electrical connectors situated outside of the hollow space and near a first end of the at least one chord of the plurality of chords of the first truss and a second set of electrical connectors situated outside of the hollow space and near a second end of the at least one chord of the plurality of chords of the first truss, the first set of electrical connectors being electrically coupled to the second set of electrical connectors through a first set of electrical wires housed inside ~~a~~the at least one chord of the first truss~~;~~, and wherein no portion of the first set of electrical wires is exposed; and

a second truss including a third set of electrical connectors situated near a first end of the second truss and a fourth set of electrical connectors situated near a second end of the second truss, the third set of electrical connectors being coupled to the fourth set of electrical connectors through a second set of electrical wires housed inside a chord of the second truss,

wherein the second end of the first truss is coupled to the first end of the second truss, and wherein the second set of electrical connectors is coupled to the third set of electrical connectors.

12. ~~13.~~ The truss assembly of claim ~~12~~11, wherein the fourth set of electrical connectors are coupled to the first set of electrical connectors through the first and second set of electrical wires and via the coupling of the second set of electrical connectors and the third set of electrical connectors.

13. ~~14.~~ The truss assembly of claim ~~12~~11, further comprising:

a truss tower including a fifth set of electrical connectors situated near a top of the truss tower and an input/output interface containing a sixth set of electrical connectors, the fifth set of electrical connectors being coupled to the sixth set of electrical connectors of the input/output interface through a third set of electrical wires housed inside a chord of the truss tower,

wherein the first end of the first truss is coupled to the truss tower, and the first set of electrical connectors is coupled to the fifth set of electrical connectors.

~~15.~~

14. The truss assembly of~~-~~ claim ~~14~~13, further comprising:

~~_____~~

a second truss tower, wherein the second end of the second truss is coupled to the second truss tower, and wherein the first and second trusses are substantially parallel to a ground and elevated above the ground.

15. ~~16.~~ The truss assembly of~~-~~ claim ~~14~~13, wherein the first set of electrical connectors includes at least a first power connector, the second set of electrical connectors includes at least a second power connector, the third set of electrical connectors includes at least a third power connector, and the fourth set of electrical connectors includes at least a fourth power connector, wherein the at least the first, second, third, and fourth power connectors enable transfer of an electrical power through the first and second trusses via the first and second set of electrical wires.

16. ~~17.~~ The truss assembly of~~-~~ claim ~~16~~15, wherein the electrical power is provided to at least a fifth power connector in the sixth set of electrical connectors of the input/output interface and transferred to the at least the first power connector of the first truss via at least a sixth power connector in the fifth set of electrical connectors situated near the top of the truss tower, and wherein the electrical power is transferred to at least one equipment coupled to the first or second truss.

17. ~~18.~~ The truss assembly of~~-~~ claim ~~14~~13, wherein the first set of electrical connectors includes a first connector configured to transfer at least a data signal or a control signal, the second set of electrical connectors includes a second connector configured to transfer at least the data signal or the control signal, the third set of electrical connectors includes a third connector configured to transfer at least the data signal or the control signal, and the fourth set of electrical connectors includes a fourth connector configured to transfer at least the data signal or the control signal, wherein the first, second, third, and fourth connectors enable transfer of the data signal or the control signal through the first and second trusses via the first and second set of electrical wires.

18. ~~19.~~ The truss assembly of~~-~~ claim ~~18~~17, wherein the data signal or the control signal is provided to at least a fifth connector configured to transfer the data signal or the control

signal in the sixth set of electrical connectors of the input/output interface, and wherein the -data signal or the control signal is transferred to the first connector of the first truss via at least a sixth connector configured to transfer the data signal or the control signal in the fifth set of electrical connectors situated near the top of the truss tower, and wherein the data signal or the control signal is transferred to at least one equipment coupled to the first or second truss.

19. ~~20.~~ A method for constructing a truss with integrated wiring, the method comprising:

coupling a plurality of chords together with a plurality of support members, wherein at least one chord of the plurality of chords includes a hollow space along a length of the at least one chord of the plurality of chords;

coupling a first set of electrical connectors near a first end of the at least one chord of the plurality of chords, wherein the first set of electrical connectors is outside of the hollow space;

coupling a second set of electrical connectors near a second end of the at least one chord of the plurality of chords, wherein the second set of electrical connectors is outside of the hollow space; and

coupling the first set of electrical connectors to the second set of electrical connectors through a set of electrical wires housed in the hollow space of the at least one chord of the plurality of chords, wherein no portion of the set of electrical wires is exposed, and wherein the first set of electrical connectors and the second set of electrical connectors are configured to mate with respective electrical connectors of adjacent trusses.