cable. The opening can be circular, oval or other shape. Each airfoil on a cable can rotate independently of the other airfoils. For example, airfoil 22a can rotate about the cable independently of airfoil 22b. The airfoil can be of different lengths along a cable. For example, an airfoil disposed adjacent to the rim can have a shorter length that one disposed adjacent to the rim. When rotating, the airfoils are moving through the air at differing speed, due to the fact that the distance traveled for one airfoil is along a difference circumferential path. This travel distance can be represented by the $travel\ distance\ = 2\pi r^2$ where r is the distance of the airfoil from the hub. Because each airfoil can rotate about the cable independently, the angle of attack of each airfoil can decrease from the hub to the rim. Further, the airfoil section can be longer at the rim than the hub as the angle of attack does not change as much the further the distance from the hub (e.g. r). The angle of attack can stay relative the same while the pitch of each airfoil can vary from hub to rim.

[0031] In operation, the rim can engage a generator wheel 24 of generator 26 so that rotational energy from the rim can be transferred to the generator wheel and therefore turn the generator to produce electricity.

[0032] Referring to Figure 3, an example of a section of an airfoil 40 is shown. The airfoil can include a leading edge 28 and a trailing edge 30. A cable opening 32 can be included in the airfoil to receive the cable and allow the airfoil to rotate about the cable. A forward opening 34 can be included and have a generally pyramid cross section and reduce the weight of the airfoil. A rear opening 36 can be included having a tear drop cross section. In one embodiment, the airfoil is symmetrical along bisect 38. In one embodiment, the trailing edge of the airfoil can include an upturned section 39 that

[0035] Referring to Figure 6, a plurality of airfoils are shown carried by cable 16 wherein each airfoil can independent rotate about the cable 16. The airfoil can include an opening 32 (Figures 2) that received the cables and attached the airfoil to the wind turbine. Given that each airfoil can have a different angle of attack, the airfoil assembly 50 can act as a blade with a twist. As each airfoil can rotate independently to each other, the airfoil assembly can result in a twist resulting from the true wind speed, a twist that is not possible with the transitional single blade. Therefore, an airfoil can automatically adjust to changes in the relative positions of the wind when the cable opening 32 location is placed between the leading edge and trailing edge allowing the airfoil to automatically position itself at an optimum angle of attack regardless of true wind or apparent wind direction.

[0036] Referring to Figure 7A, several airfoils are shown with airfoil 52a being positioned above airfoil 52b which it in turn positioned over airfoil 52c. Given that the vanes position each airfoil with different angles of attack, we see that $\alpha_a \neq \alpha_b \neq \alpha_c$ so that the assembly creates a twist along the length of the cable. In one embodiment, $\alpha_a, \alpha_b, \text{and } \alpha_c$can all be positive relative to horizontal line 41. Figure 7B shows the plurality of the airfoils superimposed as they would be along the cable.

[0037] The invention can provide for automatic blade pitch control with no blade pitch drive system or software. The airfoil sections can automatically adjust to the optimum 80-foot blade twist. The automatic blade twist can also adjust itself for the true wind speed which current blades cannot do. Maintenance will be significantly less than what is required with the traditional designs. Completely changing an airfoil assembly will take significantly less time than current blade exchanges. Transportation of the wind

What is claimed is:

1. A wind turbine comprising:

a wind turbine wheel having a hub, a rim and a cable extending between the hub and the rim;

a set of airfoils rotatably carried by the cable and disposed between the hub and the rim;

a cinch attached to the cable and disposed between adjacent airfoils; and,

an upturned section included in at least one airfoil in the set of airfoils defined by an upward slope of a surface contour along a top side disposed at a trailing edge of the airfoil relative to a horizontal plane extending from a leading edge to said trailing edge, wherein each airfoil has a different angle of attack relative to an adjacent airfoil.

2. The wind turbine of claim 1 including:

an inner cable extending between a proximal end of the hub and the rim; and,

a set of inner airfoils carried by the inner cable.

3. The wind turbine of claim 2 including:

an outer cable extending between a distal end of the hub and the rim; and,

a set of outer airfoils carried by the outer cable.

4. The wind turbine of claim 1 including:

a first airfoil adjacent to the hub having a first length;

a second airfoil adjacent to the rim having a second length; and,

wherein the first length is less than the second length.

5. The wind turbine of claim 4 including an intermediate airfoil having a length between the first length and the second length.

6. The wind turbine of claim 1 including a spacer assembly disposed between adjacent airfoils.

7. The wind turbine of claim 6 including a resilient member included in the spacer assembly.

8. The wind turbine of claim 6 including a washer included in the spacer assembly.

9. The wind turbine of claim 1 wherein an airfoil in the set of airfoils has a length in a range of 2 feet to 12 feet.

10. The wind turbine of claim 1 including sailets attached to the rim extending from an exterior of the rim.

11. The wind turbine of claim 10 wherein the sailets can include a variable pitch.

12. The wind turbine of claim 1 including a vane attached to at least one airfoil in the set of airfoils.

13. The wind turbine of claim 1 wherein the airfoil can include material selected from the group consisting of high performance vinyl ester resin, 40% unidirectional fiberglass reinforcement, 17% continuous fiberglass mat, resin mixture, UV inhibitors, pigments, surfacing coatings and any combination.

14. The wind turbine of claim 1 including a cable opening defined in each airfoil in the set of airfoils for receiving the cable.

15. The wind turbine of claim 1 including a generator having a generator wheel configured to engage the rim and disposed below the rim.

16. A wind turbine comprising:

a wind turbine wheel having a rim;

a hub included in the wind turbine wheel having a proximal end and a distal end;

an inner set of cables extending between the proximal end of the hub and the rim;

a set of inner airfoils rotatably attached to the inner set of cables;

an outer set of cables extending between the distal end of the hub and the rim;

a set of outer airfoils rotatably attached to the outer set of cables; and

an upturned section included in at least one airfoil in the set of airfoils defined by an upward slope of a surface contour along a top side disposed at a trailing edge of the airfoil relative to a horizontal plane extending from a leading edge to said trailing edge.

17. The wind turbine of claim 16 including a spacer assembly disposed between two adjacent airfoils on the outer set of cables.

18. The wind turbine of claim 17 including a cinch included in the spacer assembly.

19. A wind turbine comprising:

a wind turbine wheel having a rim and a hub;

a set of cables extending between the hub and the rim;

a set of airfoils independently rotatably attached to the set of cables and extending between the rim and the hub; and,

an upturned section included in at least one airfoil in the set of airfoils defined by an upward slope of a surface contour along a top side disposed at a trailing edge of the airfoil relative to a horizontal plane extending from a leading edge to said trailing edge.