CLAIMS

What is claimed is:

1. A gas turbine engine comprising:

a core nacelle defined about an engine centerline axis;

a fan section with twenty (20) or less fan blades;

a fan nacelle mounted at least partially around said fan section and said core nacelle to define a fan bypass flow path for a fan bypass airflow, said fan bypass airflow having a fan pressure ratio of the fan bypass airflow during engine operation, said fan pressure ratio less than about 1.45.

2. The engine as recited in claim 1, further comprising a fan variable area nozzle movable relative to said fan nacelle to vary a fan nozzle exit area.

3. The engine as recited in claim 2, further comprising a controller operable to reduce said fan nozzle exit area at a cruise flight condition.

4. The engine as recited in claim 2, wherein said controller is operable to control said fan nozzle exit area to reduce a fan instability.

5. The engine as recited in claim 2, wherein said fan variable area nozzle defines a trailing edge of said fan nacelle.

6. The engine as recited in claim 2, wherein said fan variable area nozzle is axially movable relative to said fan nacelle.

7. The engine as recited in claim 1, further comprising a gear system driven by a core engine within said core nacelle to drive said fan section.

8. The engine as recited in claim 7, wherein said fan section defines a corrected fan tip speed less than about 1150 ft / second.

9. The engine as recited in claim 7, wherein said core engine includes a low pressure turbine which defines a low pressure turbine pressure ratio that is greater than about five (5).

10. The engine as recited in claim 7, wherein said core engine includes a low pressure turbine which defines a low pressure turbine pressure ratio that is greater than five (5).

11. The engine as recited in claim 1, further comprising a gear system driven by a core engine within the core nacelle to drive said fan section within the fan nacelle, said gear system defines a gear reduction ratio of greater than or equal to about 2.3.

12. The engine as recited in claim 1, further comprising a gear system driven by a core engine within said core nacelle to drive said fan within said fan nacelle, said gear system defines a gear reduction ratio of greater than or equal to about 2.5.

13. The engine as recited in claim 1, further comprising a gear system driven by a core engine within said core nacelle to drive said fan within said fan nacelle, said gear system defines a gear reduction ratio of greater than or equal to 2.5.

14. The engine as recited in claim 1, wherein said fan bypass airflow defines a bypass ratio greater than about six (6).

15. The engine as recited in claim 1, wherein said fan bypass airflow defines a bypass ratio greater than about ten (10).

16. The engine as recited in claim 1, wherein said fan bypass airflow defines a bypass ratio greater than ten (10).

CLAIMS:

1. A gas turbine engine comprising:

a core nacelle defined about an engine centerline axis;

a core engine at least partially disposed within the core nacelle;

a fan section with twenty (20) or less fan blades;

a gear system driven by the core engine to drive said fan section;

a fan nacelle mounted at least partially around said fan section and said core nacelle to define a fan bypass flow path for a fan bypass airflow, said fan bypass airflow having a fan pressure ratio of the fan bypass airflow during engine operation, said fan pressure ratio less than about 1.45;

a variable fan nozzle axially movable relative to the fan nacelle, the variable fan nozzle including at least two sectors; and

a controller for independently adjusting each of the at least two sectors.

2. The engine as recited in claim 1, wherein the controller is operable to reduce said fan nozzle exit area at a cruise flight condition.

3. The engine as recited in claim 1, wherein said controller is operable to control said fan nozzle exit area to reduce a fan instability.

4. The engine as recited in claim 1, wherein said fan variable area nozzle defines a trailing edge of said fan nacelle.

5. The engine as recited in claim 1, wherein said fan variable area nozzle is axially movable relative to said fan nacelle.

6. The engine as recited in claim 1, wherein said fan section defines a corrected fan tip speed less than about 1150 ft / second.

7. The engine as recited in claim 1, wherein said core engine includes a low pressure turbine which defines a low pressure turbine pressure ratio that is greater than about five (5).

8. The engine as recited in claim 1, wherein said core engine includes a low pressure turbine which defines a low pressure turbine pressure ratio that is greater than five (5).

9. The engine as recited in claim 1, further comprising a gear system driven by a core engine within the core nacelle to drive said fan section within the fan nacelle, said gear system defines a gear reduction ratio of greater than or equal to about 2.3.

10. The engine as recited in claim 1, further comprising a gear system driven by a core engine within said core nacelle to drive said fan within said fan nacelle, said gear system defines a gear reduction ratio of greater than or equal to about 2.5.

11. The engine as recited in claim 1, further comprising a gear system driven by a core engine within said core nacelle to drive said fan within said fan nacelle, said gear system defines a gear reduction ratio of greater than or equal to 2.5.

12. The engine as recited in claim 1, wherein said fan bypass airflow defines a bypass ratio greater than about six (6).

13. The engine as recited in claim 1, wherein said fan bypass airflow defines a bypass ratio greater than about ten (10).

14. The engine as recited in claim 1, wherein said fan bypass airflow defines a bypass ratio greater than ten (10).

15. The engine as recited in claim 1, wherein the at least two segments includes a first segment defined between the pylon and the lower Bi-Fi and a second segment defined between the pylon and the lower Bi-Fi on a side opposite the engine centerline axis from the first segment.

16. The engine as recited in claim 1, including an auxiliary port defining a semi-annular opening between the at least two sectors and the fan nacelle.

17. The engine as recited in claim 16, wherein the variable fan nozzle defines a first bypass flow area and the auxiliary port defines a second bypass flow area for increasing bypass flow at a desired opening position of the at least two sectors.

18. The engine as recited in claim 16, wherein a cross-sectional area of the auxiliary port is greater than a maximum area of the bypass flowpath forward of the auxiliary flow path.