**THAT WHICH IS CLAIMED IS:**

1. An antenna assembly comprising:

a main reflector;

a subreflector spaced from said main reflector and comprising a frequency selective surface (FSS) material that is reflective for a first frequency band and transmissive for both a second frequency band and a third frequency band;

a first antenna feed adjacent said main reflector and directed toward said subreflector, said first antenna feed for the first frequency band;

second and third antenna feeds arranged in a coaxial relationship and directed toward said main reflector with said subreflector therebetween, said second and third antenna feeds for the second and third frequencies, respectively, wherein said second antenna feed comprises an elongated center conductor and said third antenna feed comprises a conductor surrounding and spaced apart from said elongated center conductor;

communications circuitry coupled to said three antenna feeds and being configurable for a selected antenna feed;

a positioner configured to mount said antenna and point said antenna; and

a controller including a processor and a memory coupled thereto, the controller being configured to

store antenna pointing data for different satellite footprints in the memory,

select an antenna feed from said three antenna feeds,

configure said communications circuitry, and

operate said positioner to point said antenna to a selected satellite based upon the antenna pointing data.

2. The antenna assembly according to Claim 1 wherein said main reflector has a medial opening therein; and wherein said first antenna feed comprises an antenna feed horn extending through the medial opening.

3. The antenna assembly according to Claim 1 wherein said third antenna feed comprises a series of stepped circular conductors.

4. The antenna assembly according to Claim 1 wherein the first frequency band comprises the Ka frequency band, the second frequency band comprises the Ku band, and the third frequency band comprises the C band.

5. The antenna assembly according to Claim 1 wherein each of said first, second and third antenna feeds are operable for both transmit and receive.

6. The antenna assembly according to Claim 1 wherein said first, second and third antenna feeds are simultaneously operable.

7. A method for operating an antenna assembly comprising a first antenna feed, a second antenna feed, and a third antenna feed configured to operate at respective different frequencies, communications circuitry coupled to the three antenna feeds and being configurable for a selected antenna feed, and a positioner to mount the antenna to point the antenna, the method comprising:

positioning a subreflector spaced from a main reflector, the subreflector comprising a frequency selective surface (FSS) material that is reflective for a first

frequency band and transmissive for both a second frequency band and a third frequency band;

positioning the first antenna feed adjacent the main reflector so as to be directed toward the subreflector, the first antenna feed for the first frequency band;

positioning the second and third antenna feeds arranged in a coaxial relationship so as to be directed toward the main reflector with the subreflector therebetween, the second and third antenna feeds for the second and third frequencies, respectively, wherein said second antenna feed comprises an elongated center conductor and said third antenna feed comprises a conductor surrounding and spaced apart from said elongated center conductor;

operating a controller to store antenna pointing data for different satellite footprints in a memory coupled to the controller;

selecting an antenna feed from said three antenna feeds; and

operating said positioner to point said antenna to a selected satellite based upon the antenna pointing data.

8. The method according to Claim 7 wherein the main reflector has a medial opening therein; and wherein the first antenna feed comprises an antenna feed horn extending through the medial opening.

9. The method according to Claim 7 wherein the third antenna feed comprises a series of stepped circular conductors surrounding and spaced apart from the elongated center conductor.

10. The method according to Claim 7 wherein the first frequency band comprises the Ka frequency band, the

second frequency band comprises the Ku band, and the third frequency band comprises the C band.

11. An antenna assembly comprising:

a main reflector;

a subreflector spaced from said main reflector and comprising a frequency selective surface (FSS) material that is transmissive for a first frequency band and reflective for both a second frequency band and a third frequency band;

a first antenna feed adjacent said subreflector and directed toward said main reflector, said first antenna feed for the first frequency band;

second and third antenna feeds arranged in a coaxial relationship adjacent said main reflector and directed toward said subreflector, said second and third antenna feeds for the second and third frequency bands, respectively, wherein said first antenna feed comprises an antenna feed horn, said second antenna feed comprises an elongated center conductor, and said third antenna feed comprises a conductor surrounding and spaced apart from said elongated center conductor;

communications circuitry coupled to said three antenna feeds and being configurable for a selected antenna feed;

a positioner configured to mount said antenna and point said antenna; and

a controller including a processor and a memory coupled thereto, the controller being configured to

store antenna pointing data for different satellite footprints in the memory,

select an antenna feed from said three antenna feeds,

configure said communications circuitry, and

operate said positioner to point said antenna to

a selected satellite based upon the antenna pointing data.

12. The antenna assembly according to Claim 11 wherein said main reflector has a medial opening therein; and wherein said second and third antenna feeds extend through the medial opening.

13. The antenna assembly according to Claim 11 wherein said third antenna feed comprises a series of stepped circular conductors.

14. The antenna assembly according to Claim 11 wherein the first frequency band comprises the Ka frequency band, the second frequency band comprises the Ku band, and the third frequency band comprises the C band.

15. The antenna assembly according to Claim 11 wherein each of said first, second and third antenna feeds are operable for both transmit and receive.

16. A method for operating an antenna assembly comprising a first antenna feed, a second antenna feed, and a third antenna feed configured to operate at respective different frequencies, communications circuitry coupled to the three antenna feeds and being configurable for a selected antenna feed, and a positioner to mount the antenna to point the antenna, the method:

positioning a subreflector spaced from a main reflector, the subreflector comprising a frequency selective surface (FSS) material that is transmissive for a first frequency band and reflective for both a second frequency band and a third frequency band;

positioning a first antenna feed so as to be

directed toward the main reflector, with the first antenna feed adjacent the subreflector, the first antenna feed for the first frequency band;

positioning second and third antenna feeds arranged in a coaxial relationship adjacent the main reflector so as to be directed toward said subreflector, the second and third antenna feeds for the second and third frequency bands, respectively, wherein said first antenna feed comprises an antenna feed horn, said second antenna feed comprises an elongated center conductor, and said third antenna feed comprises a conductor surrounding and spaced apart from said elongated center conductor;

operating a controller to store antenna pointing data for different satellite footprints in a memory coupled to the controller;

selecting an antenna feed from said three antenna feeds; and

operating said positioner to point said antenna to a selected satellite based upon the antenna pointing data.

17. The method according to Claim 16 wherein the main reflector has a medial opening therein; and wherein the second and third antenna feeds extend through the medial opening.

18. The method according to Claim 16 wherein the third antenna feed comprises a series of stepped circular conductors surrounding and spaced apart from the elongated center conductor.

19. The method according to Claim 16 wherein the first frequency band comprises the Ka frequency band, the second frequency band comprises the Ku band, and the third frequency band comprises the C band.

20. The method according to Claim 16 wherein each of the first, second and third antenna feeds are operable for both transmit and receive.