WHAT IS CLAIMED

1. A junction fitting for use within a wellbore having at least one lateral branch, comprising:

a generally wye-shaped tubular body formed by a wall and defining a hollow interior, an exterior surface, an uphole end, and downhole main and lateral ends, said uphole end and downhole main and lateral ends being open to said interior;

a trunk connector located at said uphole end;

first and second uphole communication line connection points defined by said trunk connector;

a main leg connector located at said downhole main end;

a first communication line connection point defined by said main leg connector;

a lateral leg connector located at said downhole lateral end;

a second communication line connection point defined by said lateral leg connector;

a first communication line segment extending between said trunk connector and said main leg connector;

a second communication line segment extending between said trunk connector and said lateral leg connector;

said first and second communication line segments being located completely outside of said interior of said junction fitting.

said trunk connector, said main leg connector, and said lateral leg connector each including an opening formed therethrough that is in fluid communication with said interior of said junction fitting;

said first and second communication line segments extending between said first and second uphole and said first and second downhole communication line connection points, respectively;

said trunk connector arranged to connect said first and second communication line segments at said first and second uphole communication line connection points and to connect said interior of said junction fitting via said opening of trunk connector;

said main leg connector arranged to connect said first communication line segment at said first downhole communication line connection point and to connect said interior of said junction fitting via said opening of main leg connector; and

said lateral leg connector arranged to connect said second communication line segment at said second downhole communication line connection point and to connect said interior of said junction fitting via said opening of lateral leg connector.

2. The junction fitting of claim 1 further comprising:

a first longitudinal groove formed along said exterior surface, said first communication line segment being at least partially disposed within said first longitudinal groove; and

a second longitudinal groove formed along said exterior surface, said second communication line segment being at least partially disposed within said second longitudinal groove.

3. The junction fitting of claim 2 further comprising:

a third communication line segment extending between said trunk connector and said main leg connector;

a fourth communication line segment extending between said trunk connector and said lateral leg connector;

said third communication line segment being at least partially disposed within said first longitudinal groove or a third longitudinal groove formed along said exterior surface; and

said fourth communication line segment being at least partially disposed within said second longitudinal groove or a fourth longitudinal groove formed along said exterior surface.

4. The junction fitting of claim 3 further comprising:

third and fourth uphole communication line connection points defined by said trunk connector;

third downhole communication line connection point defined by said main leg connector;

fourth downhole communication line connection point defined by said lateral leg connector;

said third and fourth communication line segments extending between said third and fourth uphole and said third and fourth downhole communication line connection points, respectively;

said trunk connector arranged to connect said third and fourth communication line segments at said third and fourth uphole communication line connection points;

said main leg connector arranged to connect said third communication line segment at said third downhole communication line connection points; and said lateral leg connector arranged to connect said fourth communication line segment at said fourth downhole communication line connection points.

5.The junction fitting of claim 4 wherein:

said third downhole communication line connection point is located at differing first and second axial locations with respect to said main leg connector.

6. The junction fitting of claim 3 wherein:

each of third and fourth communication line segments is a type from the group consisting of a hydraulic communication line segment, an electric communication line segment, and a fiber optic communication line segment.

7. The junction fitting of claim 1 wherein:

said main leg connector is a stinger connector; and

said trunk connector is a receptacle connector.

8. The junction fitting of claim 3 wherein:

at least one of said first and third communication line segments is a hydraulic communication line segment; and

said trunk connector has a socket and provides an uphole hydraulic communication line connection point at an axial location on the interior surface of said socket that is in fluid communication with said hydraulic communication line segment; and

said main leg connector has a cylindrical probe and provides a downhole hydraulic communication line connection point at an axial location on the exterior surface of said probe that is in fluid communication with said hydraulic communication line segment.

9. A well system for use within a well having a main wellbore and a lateral wellbore, comprising:

a junction fitting having a generally wye-shaped tubular body formed by a wall and defining a hollow interior, an exterior surface, an uphole end, and downhole main and lateral ends, said uphole end and downhole main and lateral ends being open to said interior, said junction fitting disposed at an intersection of said main wellbore and said lateral wellbore;

a tubing string disposed in said main wellbore uphole of said junction fitting and coupled to the uphole end of said junction fitting, said tubing string defining an interior that is fluidly coupled with said interior of said junction fitting;

a main completion string disposed in said main wellbore downhole of said junction fitting and coupled to the downhole main end of said junction fitting, said main completion string having an interior that is fluidly coupled with said interior of said junction fitting; a lateral completion string disposed in said lateral wellbore and coupled to the downhole lateral end of said junction fitting, said lateral completion string having an interior that is fluidly coupled with said interior of said junction fitting;

a trunk connector pair disposed between said tubing string and said junction fitting, said trunk connector pair coupling said interior of said tubing string with said interior of said junction fitting, an upper portion of said first communication line with said mid portion of said first communication line, and an upper portion of said second communication line with said mid portion of said second communication line;

first and second uphole communication line connection points defined by said trunk connector pair;

a main leg connector pair disposed between said main completion string and said junction fitting, said main leg connector pair coupling said interior of said main completion string with said interior of said junction fitting and a lower portion of said first communication line with said mid portion of said first communication line;

first downhole communication line connection point defined by said main leg connector pair;

a lateral leg connector pair disposed between said lateral completion string and said junction fitting, said lateral leg connector pair coupling said interior of said lateral completion string with said interior of said junction fitting and a lower portion of said second communication line with said mid portion of said second communication line;

second downhole communication line connection point defined by said lateral leg connector pair; and

a first communication line extending between said trunk connector pair and said main leg connector pair;

a second communication line extending between said trunk connector pair and said lateral leg connector pair;

said first and second communication lines being located completely outside of said interior of said junction fitting; wherein

the mid portions of said first and second communication lines extend between said first and second uphole and said first and second downhole communication line connection points, respectively.

10. The well system of claim 9 further comprising:

a first longitudinal groove formed along said exterior surface of said junction fitting, a mid portion of said first communication line located within said first longitudinal groove; and

a second longitudinal groove formed along said exterior surface of said junction fitting, a mid portion of said second communication line located within said second longitudinal groove.

11.The well system of claim 9 further comprising:

a third communication line extending between said tubing string and said main completion string;

a fourth communication line extending between said tubing string and said lateral completion string;

a mid portion of said third communication line located within said first longitudinal groove or a third longitudinal groove formed along said exterior surface of said junction fitting; and

a mid portion of said fourth communication line located within said second longitudinal groove or a fourth longitudinal groove formed along said exterior surface of said junction fitting.

12. The well system of claim 11 further comprising:

third and fourth uphole communication line connection points defined by said trunk connector pair;

third downhole communication line connection point defined by said main leg connector pair;

fourth downhole communication line connection point defined by said lateral leg connector pair; and

the mid portions of said third and fourth communication lines extending between said third and fourth uphole and said third and fourth downhole communication line connection points, respectively.

13. The well system of claim 12 wherein:

said third downhole communication line connection point is located at differing first and second axial locations with respect to said main leg connector pair.

14. The well system of claim 11 wherein:

each of third and fourth communication lines is a type from the group consisting of a hydraulic communication line, an electric communication line, and a fiber optic communication line.

15. The well system of claim 12 wherein:

said trunk connector pair includes a receptacle connector located at said uphole end of said junction fitting;

main leg connector includes a stinger connector located at said downhole main end of said junction fitting.

16.The well system of claim 15 wherein:

at least one of said first and third communication lines is a hydraulic communication line; and

said receptacle connector of said trunk connector pair has a socket and provides a downhole hydraulic communication line connection point at an axial location on the interior surface of said socket that is in fluid communication with said hydraulic communication line; and

said stinger connector of said downhole main connector pair has a cylindrical probe and provides an uphole hydraulic communication line connection point at an axial location on the exterior surface of said probe that is in fluid communication with said hydraulic communication line.

17.The well system of claim 16 further comprising:

first and second ports located at said downhole hydraulic communication line connection point and said uphole hydraulic communication line connection point, respectively;

first and second valves disposed within said first and second ports, respectively.

18. The well system of claim 15 wherein:

at least one of said first and third communication lines is an electrical communication line; and

said receptacle connector of said trunk connector pair has a socket and provides a downhole electrical communication line connection point at an axial location on the interior surface of said socket that is electrically coupled with said electrical communication line; and

said stinger connector of said downhole main connector pair has a cylindrical probe and provides an uphole electrical communication line connection point at an axial location on the exterior surface of said probe that is electrically coupled with said electrical communication line.

19. The well system of claim 18 further comprising:

first and second electrical slip rings located at said downhole electrical communication line connection point and said uphole electrical communication line connection point, respectively.

20.The well system of claim 11 wherein:

at least one of said first and third communication lines is an optical communication line; and

said receptacle connector of said trunk connector pair has a socket and provides a downhole optical communication line connection point at an axial location on the interior surface of said socket that is optically coupled with said optical communication line; and said stinger connector of said downhole main connector pair has a cylindrical probe and provides an uphole optical communication line connection point at an axial location on the exterior surface of said probe that is optically coupled with said optical communication line.

21.The well system of claim 19 further comprising:

first and second optical slip rings located at said downhole optical communication line connection point and said uphole optical communication line connection point, respectively.

22. A method for completing a well, the method comprising:

positioning a main completion string in a main wellbore below a junction in the main wellbore, said main completion string defining an interior;

positioning a lateral completion string in a lateral wellbore extending from the junction, said lateral completion string defining an interior; then

positioning a wye-shaped junction fitting to engage the main and lateral completion strings so as to

i) establish fluid communication between an interior of said junction fitting and the interiors of said main and lateral completion strings,

ii) establish communication between the surface of the well and the main completion string via a first communication line segment positioned outside the interior of the junction fitting, and

iil) establish communication between the surface of the well and the lateral completion string via a second communication line segment positioned outside the interior of the junction fitting.

23. A method for completing a well, the well having a main wellbore and a lateral wellbore, the method comprising:

providing a junction fitting having a generally wye-shaped tubular body formed by a wall and defining a hollow interior, an exterior surface, an uphole end, and downhole main and lateral ends, said uphole end and downhole main and lateral ends being open to said interior;

carrying by said junction fitting a mid portion of a first communication line extending between said uphole end and said downhole main end and a mid portion of a second communication line extending between said uphole end and said downhole lateral end, said mid portions of said first and second communication lines being located completely outside of said interior of said junction fitting;

disposing a main completion string in said main wellbore at an elevation downhole of an intersection of said lateral wellbore and said main wellbore, said main completion string defining an interior and carrying a lower portion of said first communication line; disposing a lateral completion string in said lateral wellbore, said lateral completion string defining an interior and carrying a lower portion of said second communication line; disposing said junction fitting at an intersection of said main wellbore and said lateral wellbore;

coupling said downhole lateral end of said junction fitting to said lateral completion string so that said interior of said junction fitting is in fluid communication with said interior of said lateral completion string and so that said mid portion of said second communication line is connected to said lower portion of said second communication line; coupling said downhole main end of said junction fitting to said main completion string so that said interior of said junction fitting is in fluid communication with said interior of said main completion string and so that said mid portion of said first communication line is connected to said lower portion of said first communication line; disposing a tubing string in said main wellbore uphole of said junction fitting, said tubing string defining an interior and carrying upper portions of said first and second communication lines; and

coupling said uphole end of said junction fitting to said tubing string so that said interior of said junction fitting is in fluid communication with said interior of said tubing string and so that said mid portions of said first and second communication lines are connected to said upper portions of said first and second communication lines;

disposing said main completion string in said main wellbore and coupling said downhole lateral end of said junction fitting to said lateral completion string before disposing said junction fitting at said intersection of said main wellbore and said lateral wellbore; and then

coupling said downhole main end of said junction fitting to said main completion string by moving said junction fitting to said intersection of said main wellbore and said lateral wellbore to mate a main leg connector pair.

24. The method of claim 23 further comprising:

providing first and second longitudinal grooves along said exterior surface of said junction fitting;

disposing said mid portion of said first communication line within said first longitudinal groove; and

disposing said mid portion of said second communication line within said second longitudinal groove.

25. The method of claim 23 further comprising:

disposing said main completion string in said main wellbore and said lateral completion string in said lateral wellbore before disposing said junction fitting at said intersection of said main wellbore and said lateral wellbore; and then

coupling said downhole main end of said junction fitting to said main completion string and said downhole lateral end of said junction fitting to said lateral completion string by moving said junction fitting to said intersection of said main wellbore and said lateral wellbore to mate a main leg connector pair and a lateral leg connector pair.

26. The method of claim 23 further comprising:

disposing said junction fitting at said intersection of said main wellbore and said lateral wellbore; and then

coupling said uphole end of said junction fitting to said tubing string by running said tubing string into said main wellbore to mate a trunk connector pair.