CLAIMS

1. An access method, comprising:

receiving, by a first optical network unit ONU, first information from an optical line termination OLT, wherein the OLT is connected to a plurality of ONUs through an optical distribution network ODN, the plurality of ONUs comprise the first ONU, wherein the first information indicates at least one upstream wavelength supported by the OLT and the first information is comprised in a downstream physical frame or a physical layer operations, administration and maintenance PLOAM message; and

when the upstream wavelength indicated by the first information comprises an upstream wavelength supported by the first ONU, starting, by the first ONU, registration.

2. The access method according to claim 1, wherein the first information comprises a first bit, a second bit, and a third bit, wherein

the first bit indicates whether the OLT supports an upstream wavelength of 1260–1280 nanometers;

the second bit indicates whether the OLT supports an upstream wavelength of 1290–1310 nanometers; and

the third bit indicates whether the OLT supports an upstream wavelength of 1284–1288 nanometers.

3. The access method according to claim 2, wherein the first information further comprises a fourth bit; and

the fourth bit indicates whether the OLT supports an upstream wavelength of 1298–1302 nanometers.

4. The access method according to any one of claims 1 to 3, wherein the PLOAM message is a burst profile message, and the first information is located in a downstream passive optical network identifier PON-ID field in the message content field.

5. The access method according to claim 4, wherein the downstream PON-ID field includes a downstream wavelength channel identifier DWLCH ID field, and the first information is located in the DWLCH ID field.

6. The access method according to any one of claims 1 to 3, wherein the downstream physical frame comprises a physical synchronization block, the physical synchronization block comprises an operation control OC structure, and the OC structure includes a passive optical network identifier PON-ID field, and wherein the first information is located in the PON-ID field of the downstream physical frame.

7. The access method according to claim 6, wherein the PON-ID field includes a

downstream wavelength channel identifier DWLCH ID field, and the first information is located in the DWLCH ID field.

8. An access method, comprising:

transmitting, by an optical line termination OLT, first information to a first optical network unit ONU, wherein the OLT is connected to a plurality of ONUs through an optical distribution network ODN, the plurality of ONUs comprise the first ONU, and where in the first information indicates at least one upstream wavelength supported by the OLT and the first information is comprised in a downstream physical frame or a physical layer operations, administration and maintenance PLOAM message; and

when the upstream wavelength indicated by the first information comprises an upstream wavelength supported by the first ONU, the first information is used by the first ONU to start registration.

9. The access method according to claim 8, wherein the first information comprises a first bit, a second bit, and a third bit, wherein

the first bit indicates whether the OLT supports an upstream wavelength of 1260–1280 nanometers;

the second bit indicates whether the OLT supports an upstream wavelength of 1290–1310 nanometers; and

the third bit indicates whether the OLT supports an upstream wavelength of 1284–1288 nanometers.

10. The access method according to claim 9, wherein the first information further comprises a fourth bit; and

the fourth bit indicates whether the OLT supports an upstream wavelength of 1298–1302 nanometers.

11. The access method according to any one of claims 8 to 10, wherein the PLOAM message is a burst profile message, and the first information is located in a downstream passive optical network identifier PON-ID field in the message content field.

12. The access method according to claim 11, wherein the downstream PON-ID field includes a downstream wavelength channel identifier DWLCH ID field, and the first information is located in the DWLCH ID field.

13. The access method according to any one of claims 8 to 10, wherein the downstream physical frame comprises a physical synchronization block, the physical synchronization block comprises an operation control OC structure, and the OC structure includes a passive optical network identifier PON-ID field, and wherein the first information is located in the PON-ID field of the downstream physical frame.

14. The access method according to claim 13, wherein the PON-ID field includes a downstream wavelength channel identifier DWLCH ID field, and the first information is located in the DWLCH ID field.

15. A communicating apparatus, wherein the apparatus comprising means for carrying out the steps of the method according to any one of claims 1 to 14.