

★★★ <知的財産翻訳検定【第4回<和文英訳>試験】>答案用紙 ★★★

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<選択問題解答>

問 1

What is claimed is:

1. A network storage access terminal that can freely communicate with an authentication server, a processing server, and a storage unit on a network and can perform storage connection between an external device and the storage unit, the terminal comprising:

an interface unit for performing communication with the external device;

an authentication processing unit for performing a predetermined authentication processing in connection with the authentication server;

a radio connection processing unit for receiving access point information on the storage unit from the processing server, establishing a path to the storage unit on the network based on the access point information, further transmitting storage information, which includes at least a folder name and authority information concerning the storage area of the storage unit, to the external device, and having the external device acknowledge the storage unit which is the access point; and

a data processing and converting unit for receiving data from the external device, performing predetermined data processing and conversion on the data, and transmitting the data-processed-and-converted data to the storage device which is the storage access point.

問 2

An optical frequency shifter, which can shift the frequency (wavelength) of entering light by a fixed amount, is one of very important devices in the areas of optical electronics and quantum electronics covering a wide area of optical communication systems, optical measuring devices, spectral devices, etc. For such optical frequency shifters, there have been a variety of techniques proposed for optical frequency shifting.

For example, there are optical frequency shifters making use of acoustooptical effect among those on the market today. These frequency shifters use the diffraction phenomenon of light by acoustic waves (compressional waves) propagating through crystal. The optical frequency shifters using this principle, however, have relatively low upper limit of operation frequency, which is several hundreds of MHz. This is due not only to the problem that the propagation loss of acoustic waves through crystal is extremely large in the high-frequency range, but also to the basic problem that in the high-frequency range of about 1 GHz and above, the wavelength of acoustic waves is smaller than the wavelength of light waves and thus no diffraction occurs. Hence, it is impossible for the optical frequency shifting method like this to increase the amount of optical frequency shift.

問 3

In FIG. 1, a local oscillating circuit 10 includes an LC resonance circuit, which consists of a coil L and a capacitor C1, and a transistor TR, which amplifies the oscillating current generated by the coil L and the capacitor C1. Here, one end of the coil L is grounded via a diode D4, and also a tuning voltage VT is applied thereto via a resistance R2. And, the other end of the coil L is grounded via a diode D3 and a resistance R1, and also an intermediate point between the diode D3 and the resistance R1 is connected to one end of the capacitor C1. The other end of the capacitor C1 is connected to the base of the transistor TR and is also grounded via a resistance R5. The transistor TR is so configured that the collector thereof is connected to a constant-voltage power supply +B via a resistance R3 and is also connected to the base thereof via a resistance R4. Also, the emitter of the transistor TR is grounded via a capacitor C2 and a resistance R6, respectively.