Mitigation method/Results/Conclusion

After investigations, it was confirmed that the transmission equipment, and the MUX could be damaged by surge current flowing from the building with the antenna tower, due to the electric potential difference between the building and telecommunication centre. For this telecommunication installation, a bonding network reduced the potential difference between the telecom centre and the other building. MDF earthing was also connected to the earth, as shown in Figure 2.1-2.

More detailed consideration should be given to connecting earthing networks when dealing with power systems of IT installations. The earthing resistance of IT systems is too high to absorb power fault current. If the earthing networks of several buildings are connected to each other, the total earthing resistance is lower than the original individual one. Therefore, national regulations or the relative Recommendations should be referred to.

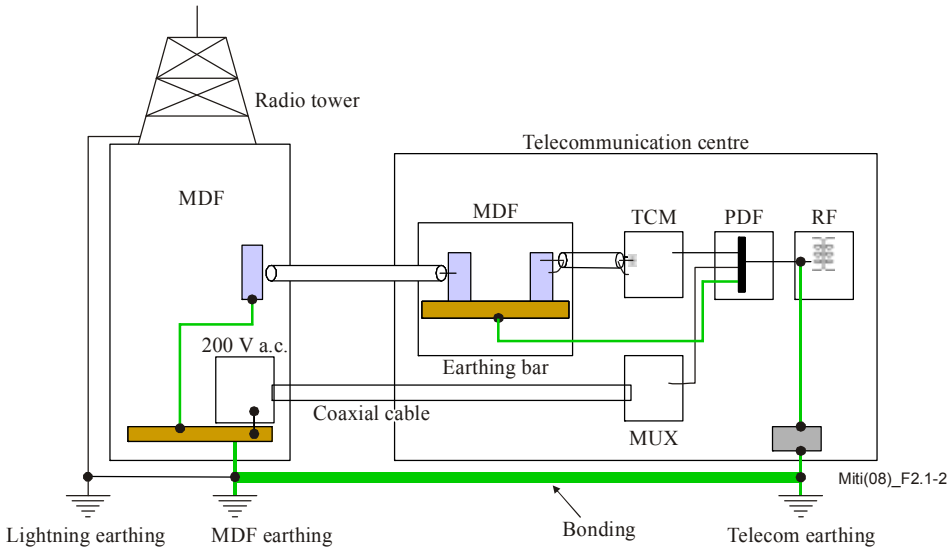

Figure 2.1-2 – Mitigation configuration

References

Recs ITU-T K.27, ITU-T K.35, ITU-T K.40, ITU-T K.56; Annex C.