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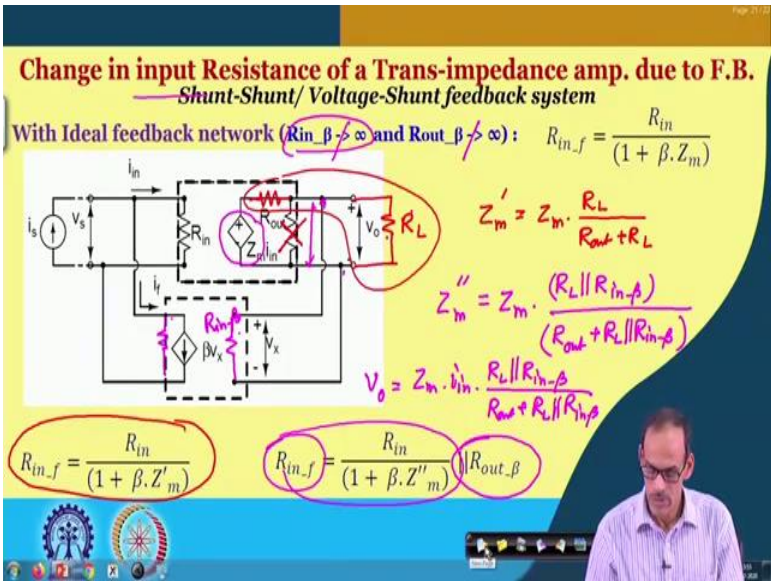

Again I have to make this correction and then if I consider this R_L it is finite. Then the input resistance of the feedback system it will be given by this where Z'_m it is load affected trans impedance and look when I say load affected it is basically whatever the attenuation factor we do have here that we need to consider along with the original Z_m.

So, Z'_m it will be $Z_m \times \frac{R_L}{R_{out}+R_L}$. On the other hand, if I consider if I consider this resistance also it is finite. So, if I consider that then the corresponding Z_m need to be replaced by Z''_m and its expression it is $Z_m \times \frac{(R_L /\!/ R_{in_\beta})}{R_{out}+(R_L /\!/ R_{in_\beta})}$.

So, why we have to consider these are in parallel that is because this resistance and this resistance they are coming in parallel. So, the voltage getting developed here which is v_o which is of course, reduced version of internally developed voltage. So, the v_o it is $Z_m \times i_{in} \times \frac{(R_L /\!/ R_{in_\beta})}{R_{out}+(R_L /\!/ R_{in_\beta})}$ and the corresponding input resistance it will be this one. Now if I consider this also which means if I consider this resistance also then that resistance also coming in parallel. So, I think that is how we can calculate the corresponding input resistance of the feedback system. So, if we consider the previous cases probably I yeah, I can see one small mistake I have done.

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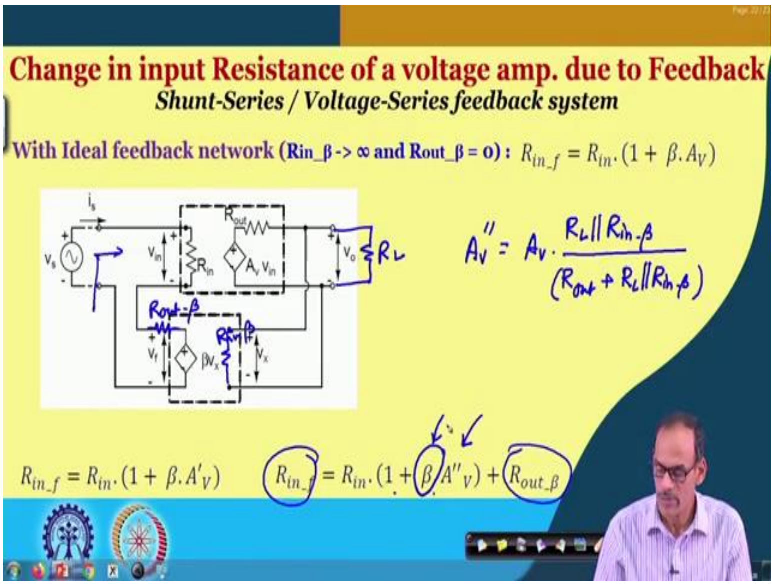

Yeah in this case when I explained that the we do have R_L here we do have this resistance and this resistance then the input resistance of the feedback system it is $(1 + \beta A''_V) + R_{out\_\beta}$ this β of course, it is remain should remain unchanged it should not be β′ because effect of this one I have already considered here.

On the other hand, affect of R_{in_β} and these R_L they are considered in this A''_V where A''_V it is $A_v \times \frac{(R_L /\!/ R_{in_\beta})}{R_{out} + (R_L /\!/ R_{in_\beta})}$ yeah the mistake I have committed before it is that I said it is β′, but actually it is not β′.

I think that is all we have to discuss, but of course then we have to consider the other feedback rather all this feedback circuit to find what will be the consequences in the output resistance. So, so far we are talking about input resistance, now we can also see the change in the output resistance before we go into this please let me take a break and then we will see how to derive the corresponding output resistance.

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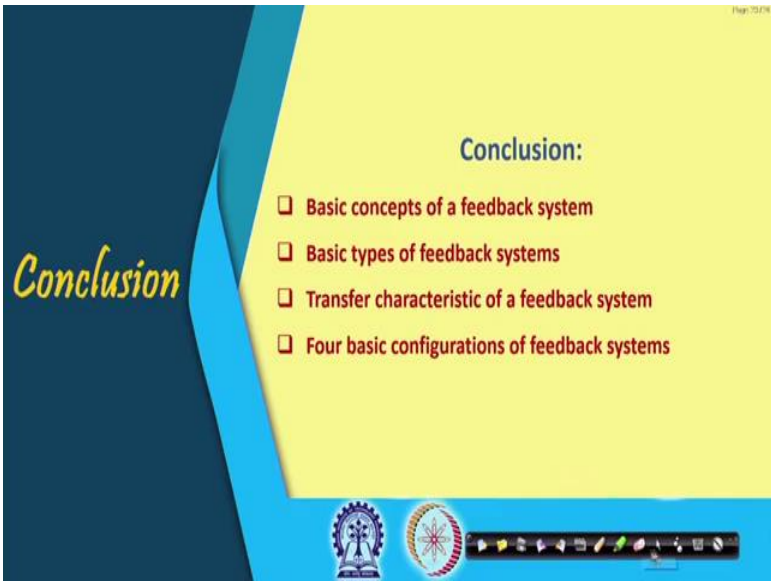

And sorry I do not want to conclude I let me cover that and then we will conclude. So, we will cover we will discuss this one and then we will conclude.

Thank you.