Questions concerning Control and modeling of haptic interfaces
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1	Explain and discuss different friction behaviors
2	How to identify the dry static friction in a mechanism, suggest one or multiple solutions?
3	What are the practical applications of haptic feedback? cite examples.
4	What are the limitations to a good identification of dry friction? What are the static/dynamic aspects of dry friction?
5	What are the requirements to design a good haptic interface?
6	What is the KB plot? How / why do you use it?
7	What is the KB Plot? what is a good KB plot?
8	Cite different ways to implement impedance control.
9	Consider the specifications of the paddle as in the provided document. What are the resolutions of the current and the force at the finger?
10	What are the main reasons causing the difference between the theoretical and experimental models of haptic interfaces? How can we deal with modeling errors in control?
11	What are the different dry friction models?
12	Illustrate the control schema of an impedance control
13	What is/are the issues of velocity resolution in implementing a dry friction compensation? How to solve it?
14	How would you implement the measurement of the interaction force in a haptic device?
15	Why is it important to have a low resolution of velocity in implementing an impedance control? How would you proceed?
16	What are the requirements of an appropriate mechanical transmission for a haptic device? Make a suggestion!
17	What is a transparent mode in human-robot interaction?
18	What is more difficult, stiffness rendering or viscosity rendering?
19	What is transparency in human-robot interaction? What are the ways to implement transparency? Discuss the advantages and disadvantages.
20	What is more difficult and why in simulating haptic feedback: to simulate higher stiffness or higher viscosities?
21	To choose an actuator for haptic feedback, give examples of "actions of the force-controlled haptic feedback" – ref Lecture of R. Baud
22	Discuss the importance of sensors in implementing haptic feedback in telemanipulation.
23	Compared to your 1-dof paddle, what is particular when implementing a multi-dof haptic feedback for telemanipulation?
24	Given a robot interacting with its environment and equipped with a force sensor at its end effector, provide a typical block diagram of a telemanipulation incorporating force feedback