

Conceptually,
The optimal reconstruction works if

①

(3.1)

or In practice, we simply choose

(3.2)

Q: How do we implement the conceptually optimal reconstruction in practice?

* Let's take a closer look at the LPF-based reconstruction

How to plot $\frac{\sin(\frac{\pi}{T}t)}{\frac{\pi}{T}t}$?

The final reconstruction (practical)

* Optimal Reconstruction in practice :

* How come we can do perfect band-limited reconstruction

Ans: When the movement of the steering wheel is limited, there is only one route to drive through all the sampling points.

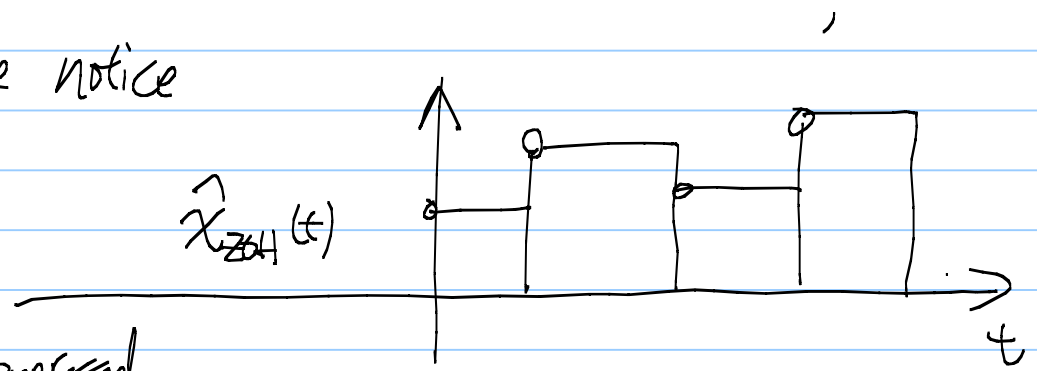
* The conceptual ITS $x_p(t)$ helps us devise the ideal band-limited interpolation.

And it also helps us to analyze the non-ideal reconstruction

Ex: The Zero-Order Hold

If we define

then we notice



can be expressed as