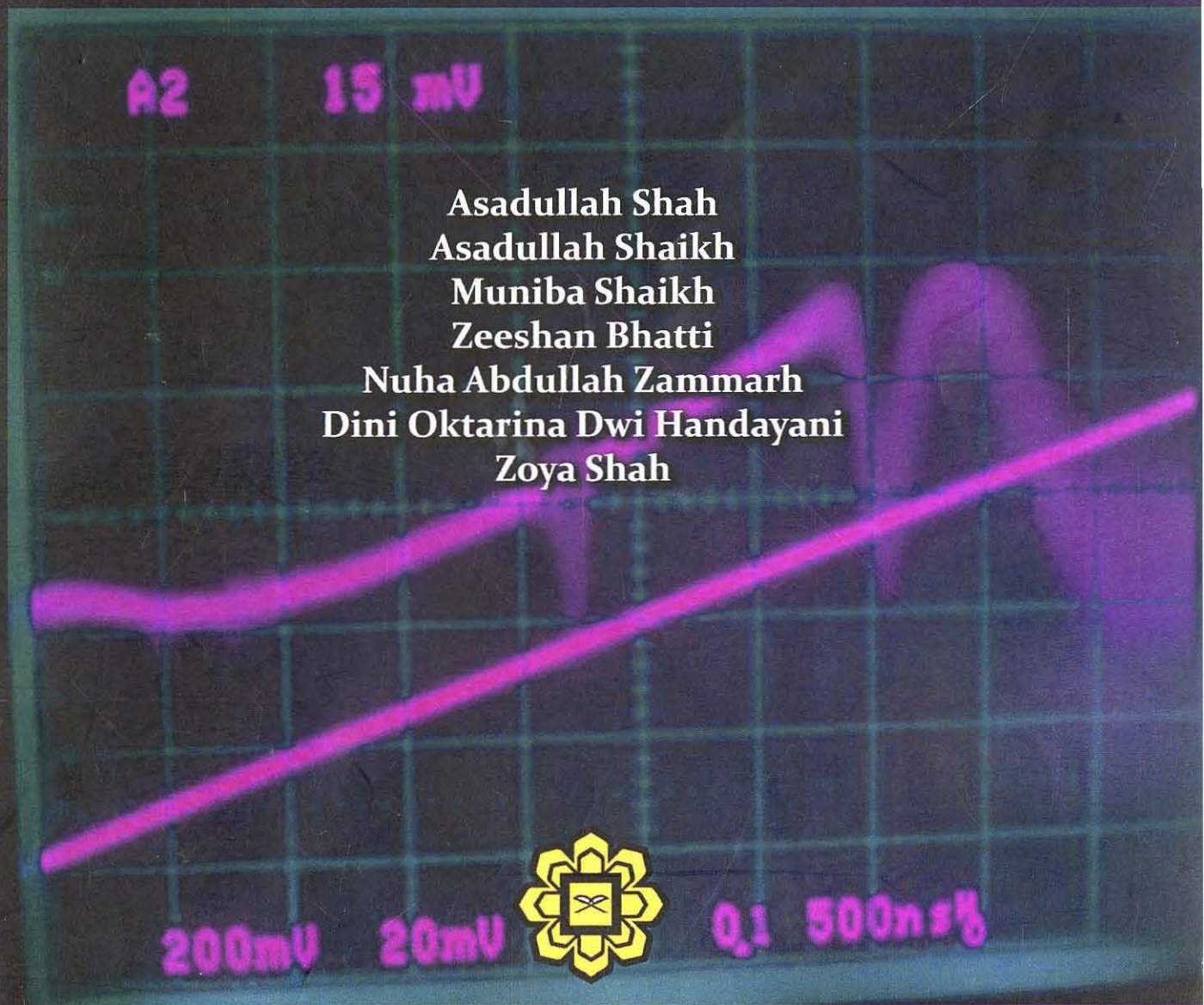
# STATISTICAL TIME DIVISION MULTIPLEXING ARCHITECTURES AND DESIGN

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# 20. DSI Advantage Capability of LFR

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## 20.0 Abstract

The Digital Speech interpolation (DSI) advantage is signal processing technique, using this technique one can maximise the systems efficiency, such as a telephonic system capability to accommodate more users due to the non-active parts within speech signal. By utilising non activity parts along with Lost Frame Reconstruction (LFR), higher DSI advantage can be achieved. By doing so more users can be allowed in the system. In this chapter both DSI and LFR are explained to how one can make use of these signal processing techniques to increase the performance of the system.

## 20.1 DSI advantage

The DSI advantage or gain achieved by frame discarding can be formulated as given in

Equation

$$LFR_{DSI} = \sum_{n=1}^{N} F_{loss} * (n)$$

Equation 20-1

For example, the $F_{loss}$ = 3%, the total LF RDSI can also be computed by 0.03 * n. For monologue speech q is around 80% so that the potential DSI advantage l/q, that is, 1.25.