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SIMULATION OF A PHASE LOCKED LOOP USING LABVIEW

BY

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Abstract. A method for simulating an analogue phase-locked loop (PLL) is shown. The programming language given is LabVIEW, but the techniques used are quite general and apply equally well to other programming languages and packages. LabVIEW seems an unlikely candidate to simulate a PLL as it is more often associated with process control systems and virtual instrumentation rather than communication systems. However it will be shown that in fact LabVIEW gives a powerful solution which is both easy to implement and with a user graphical interface comparable to any modern programming language. The simulation is fully interactive and demodulates ordinary FM like a radio receiver.

Keywords: Phase-Locked Loop (PLL), signal processing,Virtual filter, LabVIEW.