EL424: Assignment #2

Design and simulate a gated ring oscillator.

Warning: This coursework is intended to be individual work. We encourage students to discuss the problems, however, if there is evidence that material has been copied or only slightly altered without being properly referenced the coursework will result in a zero mark.

Assignment:

A screenshot of the basic circuit design is shown in the following diagram, and by varying the number of inverters and the number of D-Type flip-flops you can set the speed of the oscillator.

- **Design Considerations:**
  - The design is to be implemented and simulated in LTSpice. The target symbol and technology library is provided in the assignment directory.
  - The target speed is set by taking the last four digits of your id card number, placing a decimal point in the middle and aiming for that speed in MHz as accurately as possible detailing the trades you have to make.
  - For example: My registration number is: 20121987. I take the fifth and the last digit that reads: 17 and then the in between digits: 98. I insert the decimal point in the middle: 17.98. My oscillator should run at exactly 17.980000....000MHz

Deadline: 16.08.2013, 5pm.
No makeup quizzes or exams will be given.
Late submission will be penalized by a 5% mark reduction per day.