

RECONFIGURABLE MEASUREMENT SYSTEMS BASED ON REAL TIME AND FPGA

Jan Saliga

- Challenges in modern measuring, data acquisition and control systems
- Real time systems
- Introduction to FPGA

- FPGA in measurement systems
- LabVIEW for real time and FPGA
- Introduction to exercises and projects

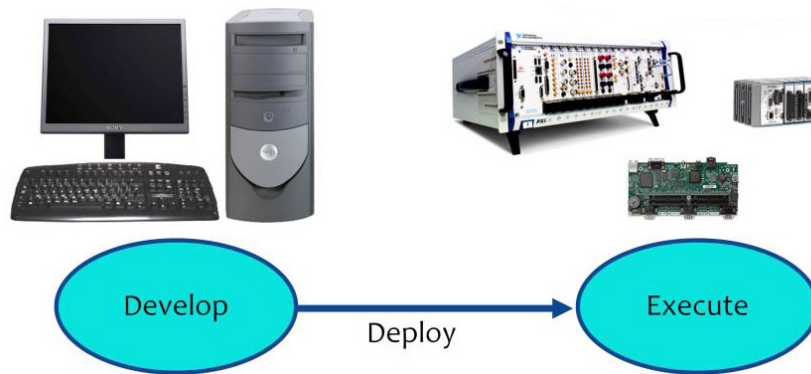


Figure 1 LabVIEW Real-Time System

SENSORS & TRANSDUCERS MEASURING WATER QUALITY PARAMETERS

Helena Geirinhas Ramos

- Water quality assessment
- Monitoring

Measurements for water-quality monitoring

- Physical
- Chemical
- Biological (bioassessment and biodiversity)

Water quality parameters

- Temperature
- Conductivity
- pH
- Dissolved oxygen
- Turbidity
- Heavy metals

| WATER QUALITY REPORT CARD | | | | | | | | | | |
|-----------------------------------|-----------|-----------|---------------------------|-------------------|--|---------------|---|--|--|--|
| Parameters | | | | | | Section grade | | | | |
| MARYLAND ANACOSTIA | | | | | | | ENTIRE ANACOSTIA: B- | | | |
| % Score | 92 | 54 | 31 | 75 | | 63 | | | | |
| Grade for each parameter | A | C | D | B+ | | | | | | |
| Trend | Improving | Improving | Degrading in recent years | Improving | | | | | | |
| Estimated years to meet criterion | 8 | 87 | n/a | 43 | | | | | | |
| UPPER DC ANACOSTIA | | | | | | | Grade F | | | |
| % Score | 61 | 33 | 26 | 60 | | 45 | | | | |
| Grade for each parameter | B- | D | D | B- | | C | | | | |
| Trend | Improving | Improving | Degrading in recent years | Seems improving | | | | | | |
| Estimated years to meet criterion | 28 | 39 | n/a | Insufficient data | | | | | | |
| LOWER DC ANACOSTIA | | | | | | | Estimated years to meet criterion n/a | | | |
| % Score | 56 | 55 | 39 | 59 | | 52 | | | | |
| Grade for each parameter | C+ | C+ | D+ | C+ | | C | | | | |
| Trend | Improving | Improving | Degrading in recent years | Improving | | | | | | |
| Estimated years to meet criterion | 54 | 25 | n/a | 59 | | | | | | |
| Overall Grade: C- | | | | | | | <small>This assessment is based on 2010 water quality data. The higher % score indicates better water quality. *Assessment of SAV is available only for the entire Anacostia River.</small> | | | |