

## SPIDA RTC IN THE USA

WAPUG MAY 1994  
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## SPIDA RTC IN THE USA

- SPIDA
- REAL TIME CONTROL (RTC)
- COLLECTION SYSTEMS IN AMERICA

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## SPIDA

- SIMULATION PROGRAM FOR INTERACTIVE DRAINAGE ANALYSIS
- FOR LOOPED SYSTEMS-FREE SURFACE REVERSE FLOW
- SELF ADJUSTING TIMESTEP LEADS TO STABLE MODEL

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## REAL TIME CONTROL

- ALLOWS FOR OPTIMIZATION OF SEWERAGE ASSETS
- AUTOMATION OF ANCILLARIES
- ENHANCED MODELING ABILITIES
- ONE SPIDA FILE CAN BE USED WITH SEVERAL RTC FILES - ENABLING DIFFERENT SCENARIOS TO BE TESTED

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## REAL TIME CONTROL

- |  |  |
|--|--|
| ■ <u>ADVANTAGES</u>                              | ■ <u>DISADVANTAGES</u>   |
| ■ VERY FLEXIBLE                                  | ■ CAN BE DIFFICULT TO UNDERSTAND   |
| ■ MINOR MODIFICATION TO ORIGINAL MODEL           | ■ REQUIRES TESTING OF RTC FILE TO ENSURE THAT IT BEHAVES LIKE YOU EXPECT |
| ■ ENABLES FULL AUTOMATION OF COMPLEX ANCILLARIES |  |

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## SYSTEM DESCRIPTION

- MAINLY COMBINED
- SOME SURFACE WATER SYSTEMS BUT LITTLE KNOWN ABOUT THE LOCATION AND EXTENT
- INDUSTRIAL AND RESIDENTIAL LAND USE
- ISOLATED IMPERMEABLE AREAS

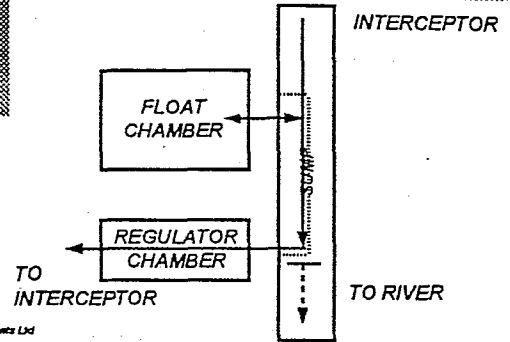
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## SOFTWARE USED

- SPIDA RTC
- KEY MIDAS AND
- KEY WALLINGFORD
- AUTOCAD

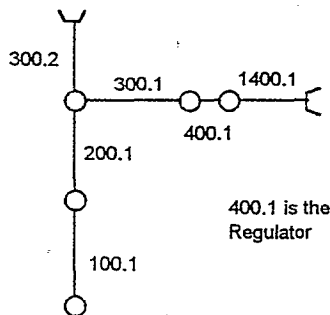
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## SCHEMATIC LAYOUT OF TYPICAL REGULATOR



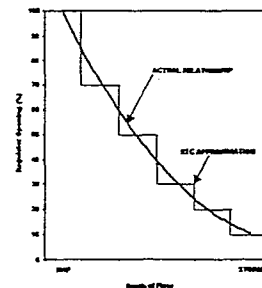
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## SAMPLE RTC LAYOUT



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## DEFINITION OF REGULATOR MODE OF OPERATION



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## RTC FILE

```

1 test for regulator setup
400.1
RANGE dep1 Y 200.1          0.2
RANGE dep2 Y 200.1          0.2  0.4
RANGE dep3 Y 200.1          0.4  0.6
RANGE dep4 Y 200.1          0.6  0.8
RANGE dep5 Y 200.1          0.8
RULE dep1 POS 0.450
RULE dep2 POS 0.300
RULE dep3 POS 0.200
RULE dep4 POS 0.100
RULE dep5 POS 0.000
TERMINATOR
    
```

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## CONCLUSIONS

- CAPABILITY OF SEWERAGE MODELLING CONSIDERABLY INCREASED
- THE REGULATORS COULD NOT HAVE BEEN MODELLED WITHOUT THIS PACKAGE
- CONSIDER THAT SIMPLE RTC CONTROL ALREADY EXISTS IN SPIDA
- CARE NEEDS TO BE EXERCISED OVER THE WRITING OF THE RTC FILE

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