

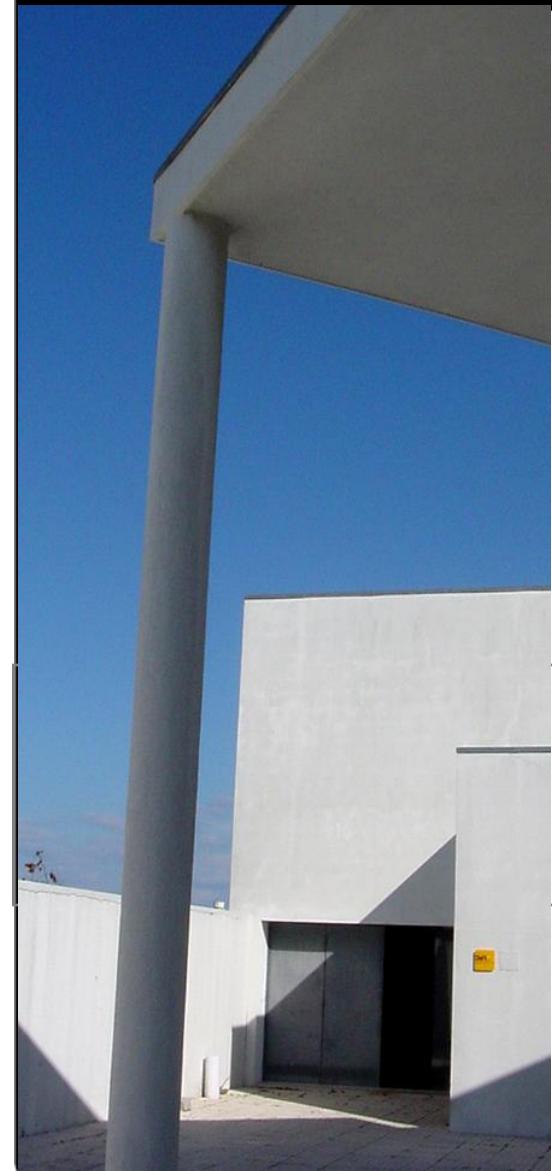
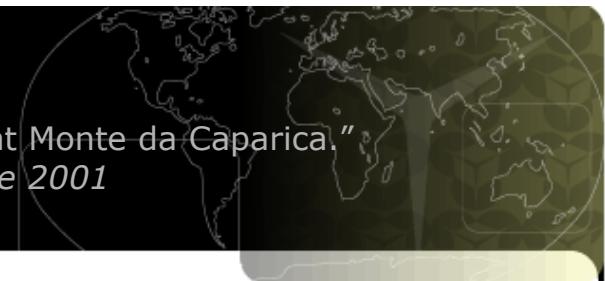


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"Silicon Valley at Monte da Caparica."
- PC World, June 2001



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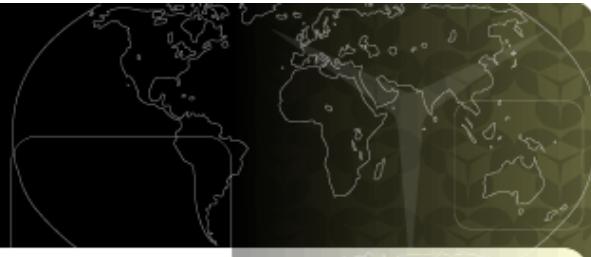
LiveAnywhere Traffic

António Câmara



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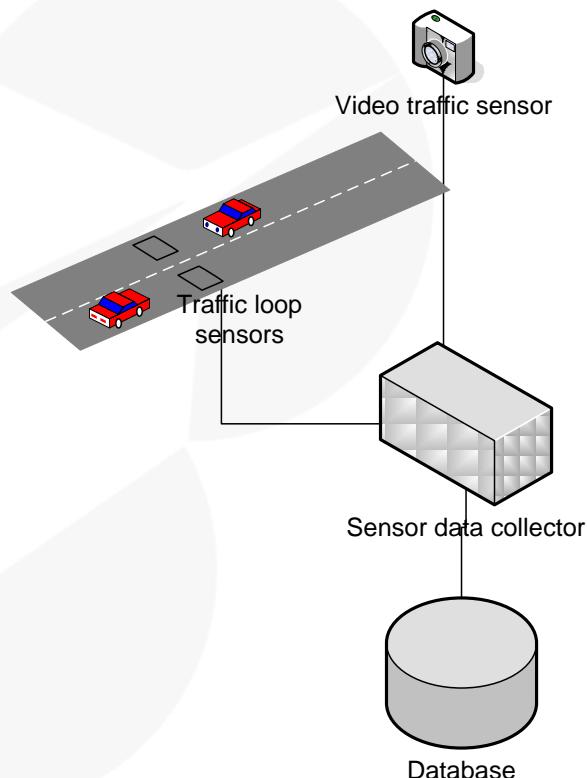
LiveAnywhere Traffic

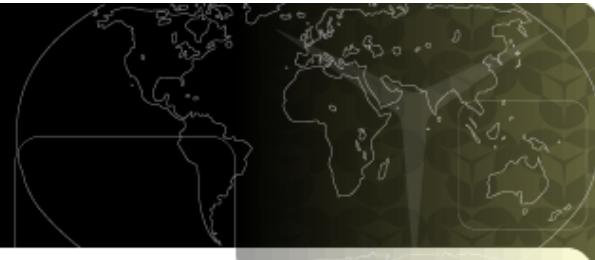
- **Traffic information processing in real time**
- **Traffic forecast**
- **Optimal routing**
- **Mobile access**



Data collection

- **Information collected by sensors (ground and video)**
 - Average speed
 - Intensidade de tráfego
- **Variables**
 - Time (hour, day, week)
 - Meteo variables



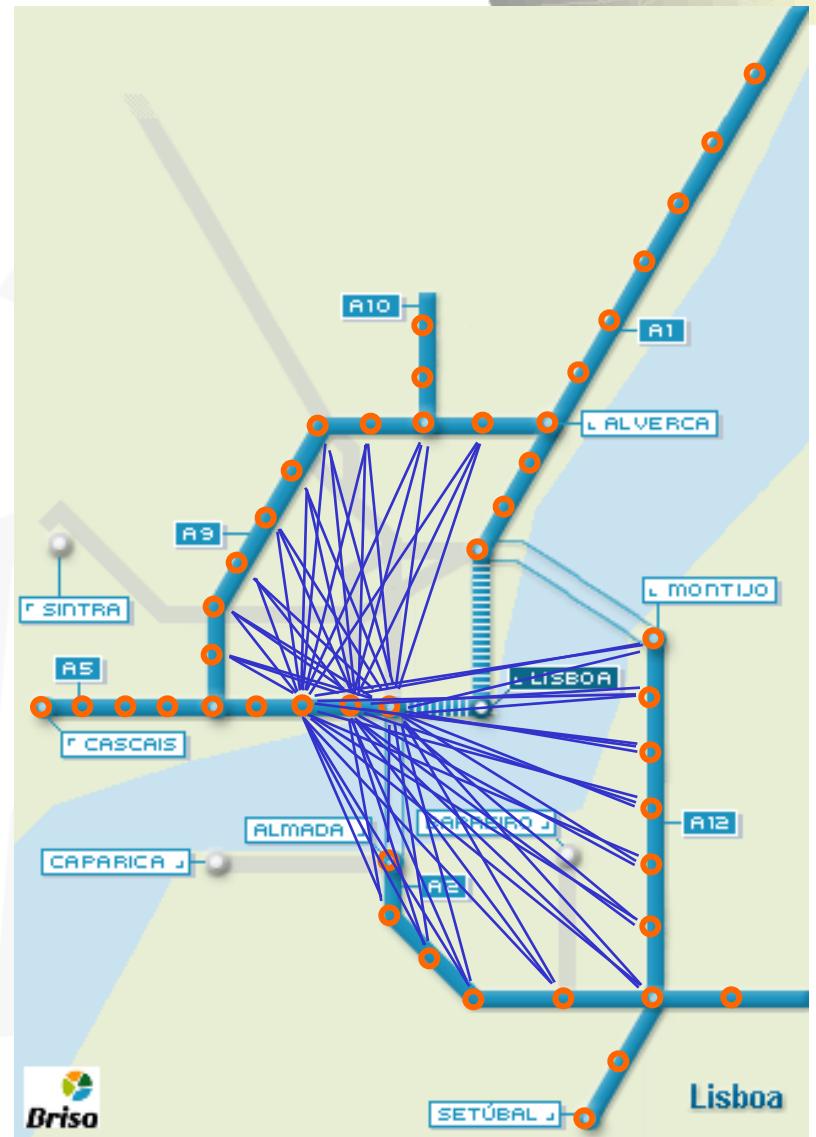


Forecasting

- Neural network based algorithms
- Uses information collected on past events
- Infers relationships between traffic intensity in space and time



- **Availability of sensor network**
- **Machine learning**
 - Done periodically
 - Relates values obtained with each sensor with all others obtained at given time
 - 5 minutes
 - 10 minutes
 - 20 minutes
 - Classified by
 - Hour
 - Day of the week
 - Day of the month
 - Month
 - Holidays
 - Meteorological variables



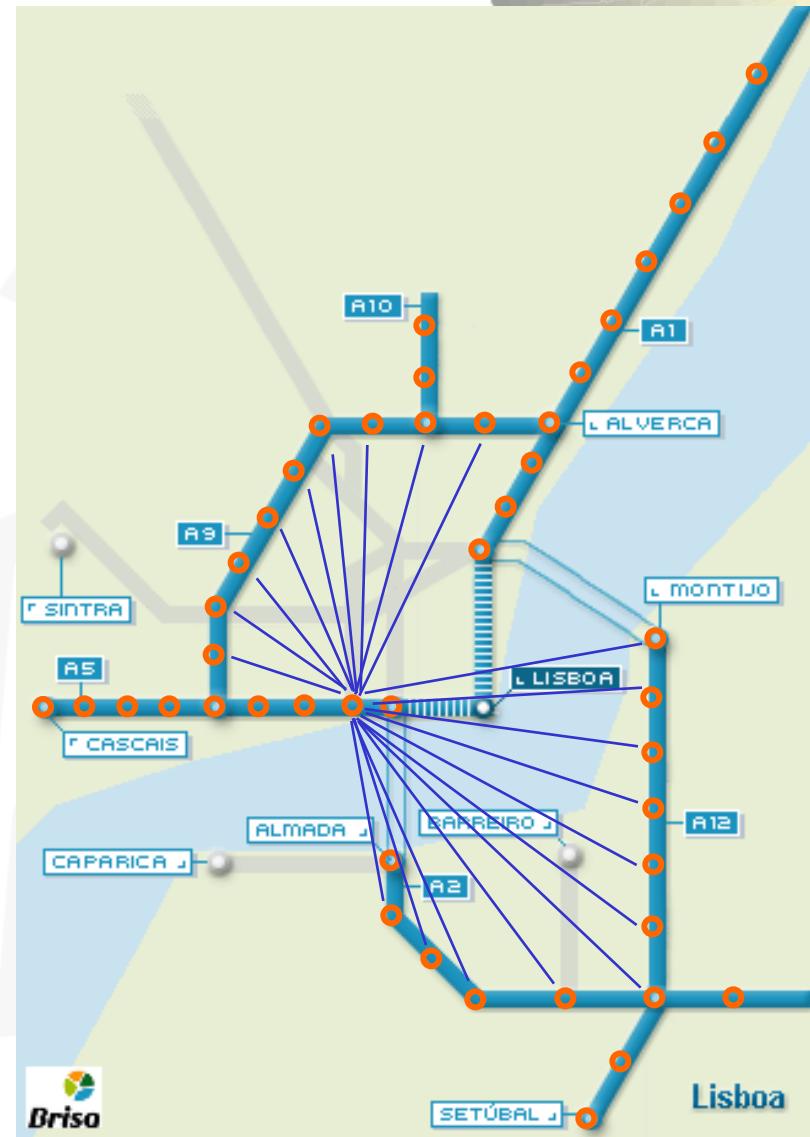


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- Given the information at a given moment, it is possible to forecast the traffic intensity in every point within:
 - 5 minutes
 - 10 minutes
 - 20 minutes





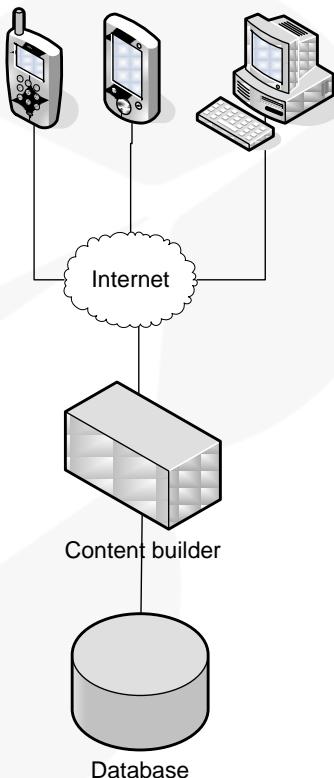
Alerts

- **Detection of anomalous traffic situations**
- **Alerts based on:**
 - Current information
 - Forecasted information



Visualization

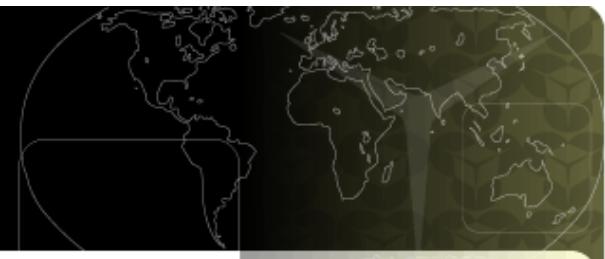
- **Information available in XML**
- **Available for any device**



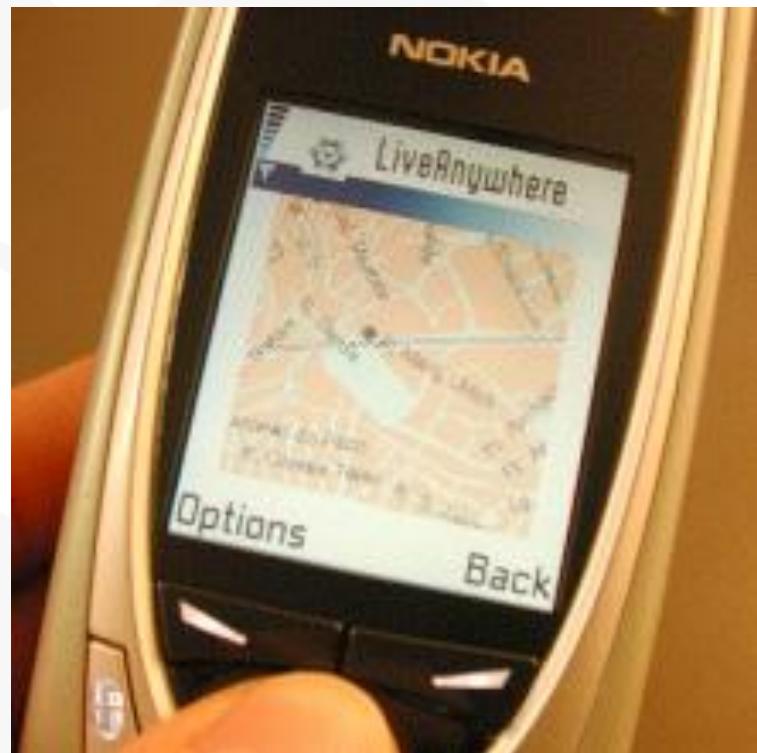
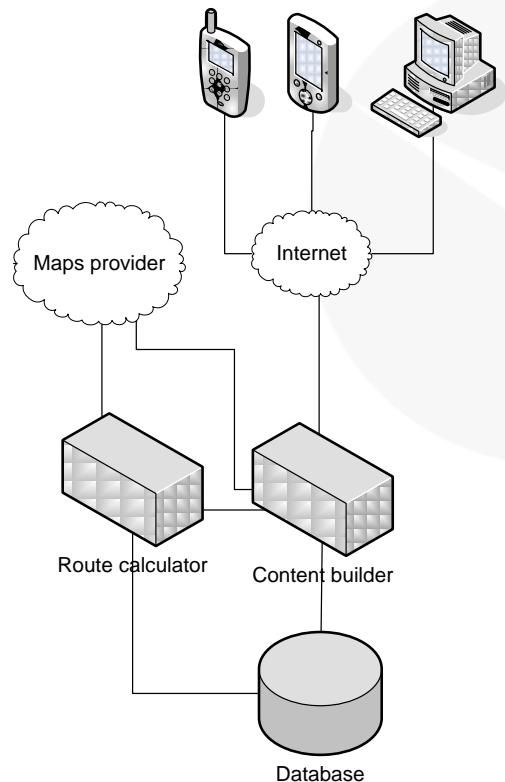


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Visualization



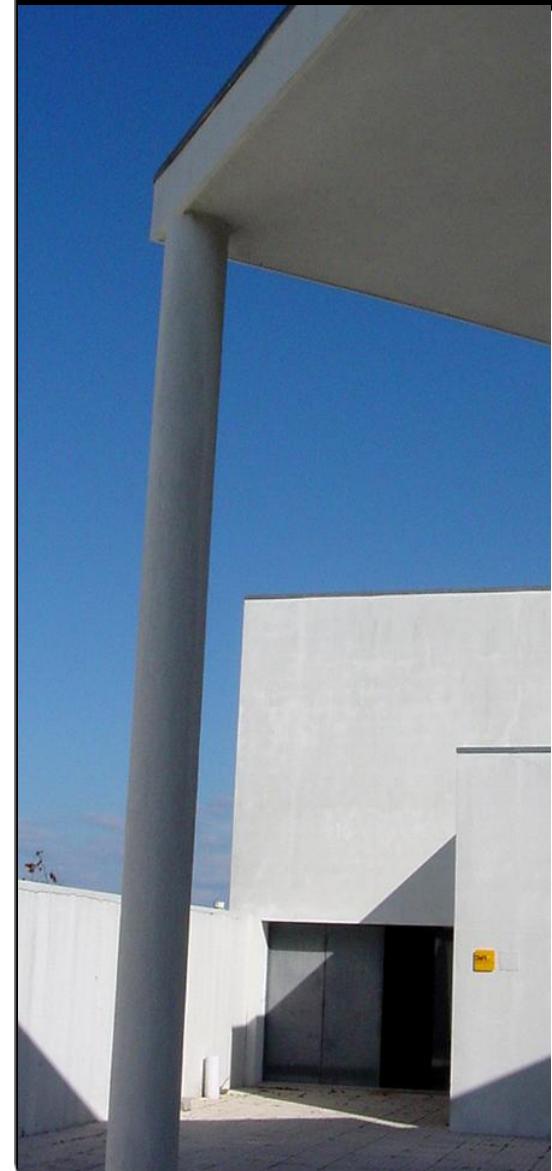
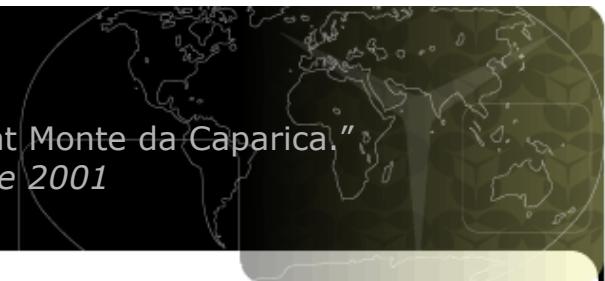


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