

airTEXT: Air Quality Forecasts for London

Amy Stidworthy

On behalf of the *airTEXT* consortium



European Space Solutions
Environmental Monitoring
London, 5th December 2012

CERC

Cambridge Environmental Research Consultants
Environmental Software and Services

What is *airTEXT*?

- *airTEXT* is the **air quality forecasting service for London**, operated by CERC on behalf of the *airTEXT* consortium, a group of organisations including UK Environment Agency, Health Protection Agency, Greater London Authority (GLA) and all Greater London local authorities
- *airTEXT* provides free air quality alerts direct to over 7000 subscribers
- *airTEXT* was initially developed in 2007 under ESA-funded PROMOTE, and supported by further funding from FP7 PASODOBLE, UK National Government (DEFRA), the GLA and all the Greater London Local Authorities

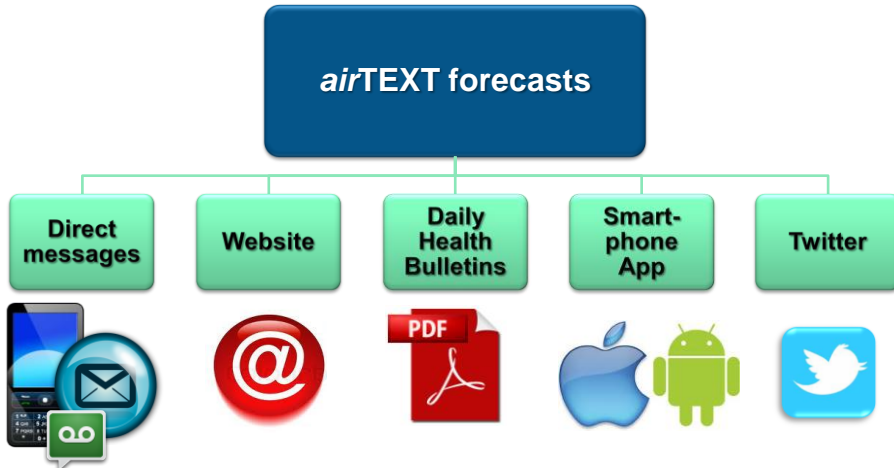


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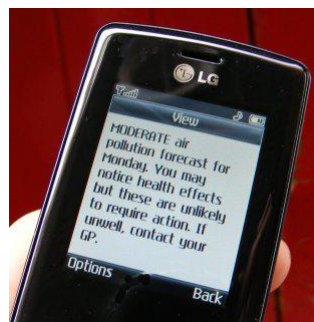


Overview of *airTEXT* products



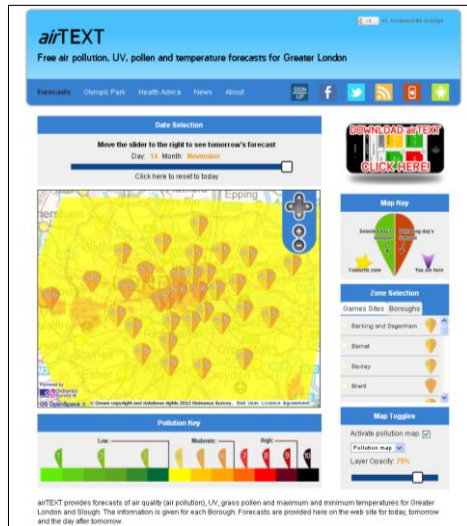
Direct alert messages

- Alert messages sent direct to subscribers
- SMS text, email or voicemail – subscriber chooses
- Currently over 7000 subscribers



airTEXT website

- 3-day forecast
- One pin per London borough
- Optional pollution map, with variable opacity



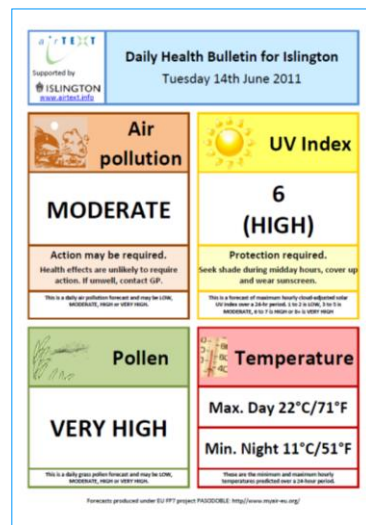
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Daily Health Bulletins

- One bulletin per London borough
- Emailed daily to one email address per borough, for onward dissemination
- Designed to be printed out in black and white or colour and pinned up in public spaces



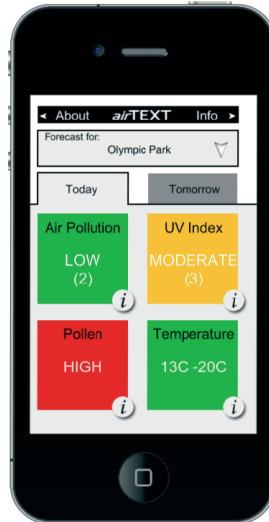
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Smartphone App (iPhone and Android)

- Launched in July 2012 ahead of the Olympic Games
- 2-day forecast
- Select London borough or Games site
- Air pollution, UV, pollen and temperature



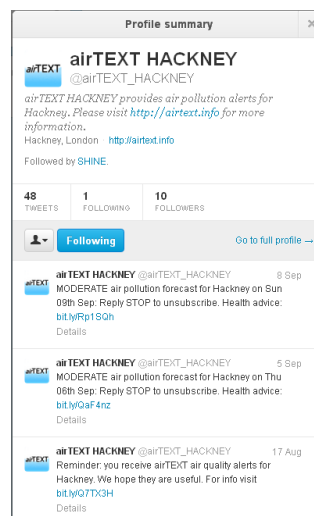
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Twitter

- One Twitter account for each London borough
- Text 'follow airtext_hackney' to 86444 and any airtext_hackney tweets will be texted to you
- airTEXT only tweets a forecast when the predicted level is moderate or above, so the tweet acts as an alert



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Leaflet to describe the *airTEXT* services

The *airTEXT* iPhone and provides for UV, grass pollen and maximum & minimum temperature as air pollution.

People with asthma, emphysema, bronchitis, heart disease and angina are more at risk from high levels of air pollution. There are simple steps you can take to reduce the likelihood of any impacts. These include taking your inhaler or asthma spray with you, take extra doses if symptoms worsen, and avoiding strenuous outdoor activity on polluted days.

If you care for or are a parent of someone with these symptoms, advance warning of elevated pollution levels from *airTEXT* may help you look after them better.

***airTEXT* via smartphone:**
The free *airTEXT* app for iPhone, iPad and Android give forecasts of air pollution, UV, grass pollen and maximum and minimum temperature for Today & Tomorrow. Using your smartphone, these QR codes will take you to the app stores.

app for iPhone and iPad:

app for Android:

***airTEXT* via SMS:**
If your mobile phone network is Orange, Vodafone, O2, 3 or Sure (CWC), text follow *airTEXT* BOROUGH NAME to 86444, to receive free SMS *airTEXT* alerts for that borough.

The list of BOROUGH NAMES (up to 7 letters) is shown on the right of this page. There are also *airtext_central*, *airtext_north*, *airtext_south*, *airtext_east* and *airtext_west*.

***airTEXT* via twitter:**
If you use twitter you can follow the alerts for @airtext_central, @airtext_north, @airtext_south, @airtext_east and @airtext_west or any of the borough alert accounts that are listed on the right.

***airTEXT* on the web:**
On www.airtext.info you will find forecasts of air pollution, UV, grass pollen and maximum & minimum temperature for Today, Tomorrow and the Day after tomorrow.

For further help:
If you are unable to receive *airTEXT* alerts by any of these methods, please contact your local borough and advise them of this problem. This will help us plan our services for the future and ensure we get alerts to everyone who needs them.

List of *airtext* BOROUGH NAME

Barking and Dagenham	<i>airtext_BDE</i>
Barnet	<i>airtext_BARNET</i>
Bexley	<i>airtext_BEXLEY</i>
Brent	<i>airtext_BRENT</i>
Bromley	<i>airtext_BROMLEY</i>
Camden	<i>airtext_CAMDEN</i>
City of London	<i>airtext_COL</i>
City of Westminster	<i>airtext_COW</i>
Croydon	<i>airtext_CROYDON</i>
Ealing	<i>airtext_EALING</i>
Enfield	<i>airtext_ENFIELD</i>
Greenwich	<i>airtext_GRE</i>
Hackney	<i>airtext_HACKNEY</i>
Hammersmith and Fulham	<i>airtext_HAF</i>
Haringey	<i>airtext_HGY</i>
Harrow	<i>airtext_HARROW</i>
Havering	<i>airtext_HAV</i>
Hillingdon	<i>airtext_HIL</i>
Hounslow	<i>airtext_HOUNSLO</i>
Islington	<i>airtext_ISLINGTON</i>
Kenington and Chelsea	<i>airtext_RBK</i>
Kingston upon Thames	<i>airtext_KIN</i>
Lambeth	<i>airtext_LAMBETH</i>
Lewisham	<i>airtext_LEW</i>
Merton	<i>airtext_MER</i>
Newham	<i>airtext_NEWHAM</i>
Redbridge	<i>airtext_RED</i>
Richmond upon Thames	<i>airtext_RIC</i>
Slough	<i>airtext_SLOUGH</i>
Southwark	<i>airtext_SOU</i>
Sutton	<i>airtext_SUTTON</i>
Tower Hamlets	<i>airtext_TOW</i>
Waltham Forest	<i>airtext_WAL</i>
Wandsworth	<i>airtext_WAN</i>

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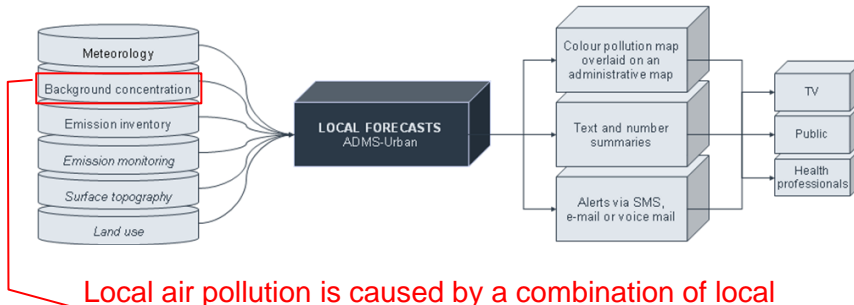
How does *airTEXT* use satellite data?

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airTEXT system



Local air pollution is caused by a combination of local emissions and material transported from outside the local area; the latter is not modelled explicitly by the local model

Need a regional forecast for the “background”

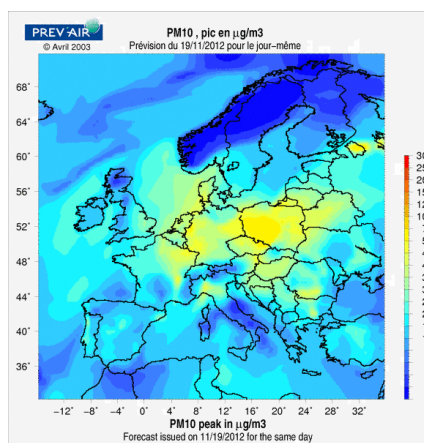
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Regional air pollution forecast

- Regional air pollution forecasts predict **trans-boundary transport** of pollutants
- Currently use Prev’Air CHIMERE forecasts, which contribute to regional ensemble forecast of GMES Atmosphere Service (MACC and MACC-II)
- Planning to migrate to either GMES regional ensemble or higher resolution PASODOBLE forecast for north-western airshed, depending on validation results
- These regional models **assimilate satellite observations to improve their forecast**

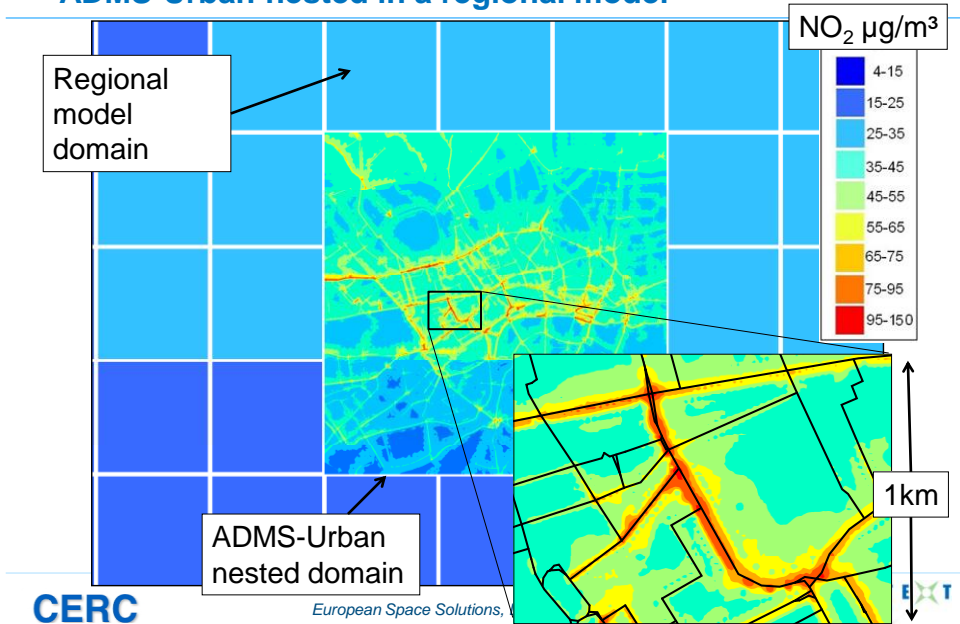


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ADMS-Urban nested in a regional model



Summary

- *air*TEXT is the air quality forecasting service for London
- *air*TEXT products include
 - alerts sent direct to subscribers via text, email and voicemail
 - a website showing high-resolution zoomable pollution maps
 - a smartphone application
 - daily health bulletins sent by email
 - Twitter alerts
- The *air*TEXT system uses a combination of regional and street-scale pollution forecasts; the regional models assimilate satellite data to improve their forecasts

Thank you for your attention