
Archive of SID

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(// : // :)

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NO₂ SO₂

O₃ PM₁₀ PM_{2.5} CO

(PSI)

()

:

...

Web
(Triantafyllou *et al.*, 2005)
Gerhard
Web
Konstantin (Gerhard, 2005)
(Konstantin, 2000)
Atabi
WebGIS
(Atabi *et al.*, 2005)
Dockery *et al.*)
(Abbey *et al.*,1999)
(*al.*, 1994; Touloumi *et al.*, 2000
(Vedals *et al.*,1997)
(Shwartz *et al.*, 1982)
(WebGIS)
WWW
(Aleshekh *et al.*, 2006)
Karatzas .
Web
Anjaneyulus (Karatzas *et al.*, 2000)
Triantafyllou (Anjaneyulus *et al.*, 2005)

¹ Online
² Pilot.

(AQCC)

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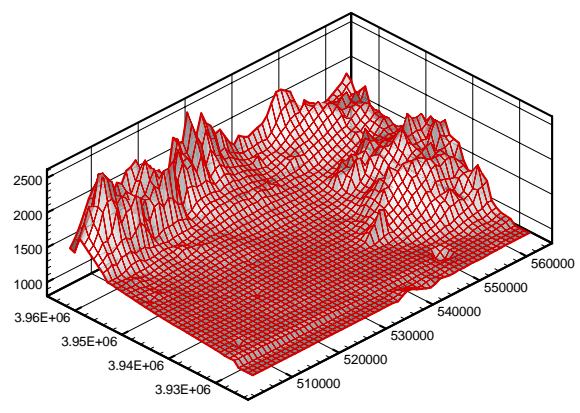
Archive of SID

WebGIS

PSI

(Oracle 10g)

¹ Air Quality Control Company
² Pollutant Standard Index



(AQCC, 2010)

$I_P = (I_{Hi} - I_{Lo} / BP_{Hi} - BP_{Lo}) (C_P - BP_{Lo}) + I_{Lo}$
 (Alijani, 2004; Asadollah-Fardi, 2004)

(AQCC, 2010)

PSI	CO	NO ₂	SO ₂	O ₃	PM ₁₀	PM _{2.5}
-
-
-
-
-

$$C_i = \frac{\sum (1/r_i)^2 * PSI}{\sum (1/r_i)^2}$$

r_i
PSI
C_i

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WebGIS

WebGIS

GIS

WebGIS

PSI

(IP)

WebGIS

WebGIS

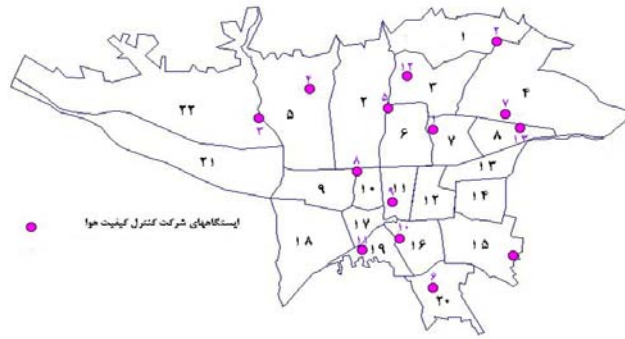
)

PSI

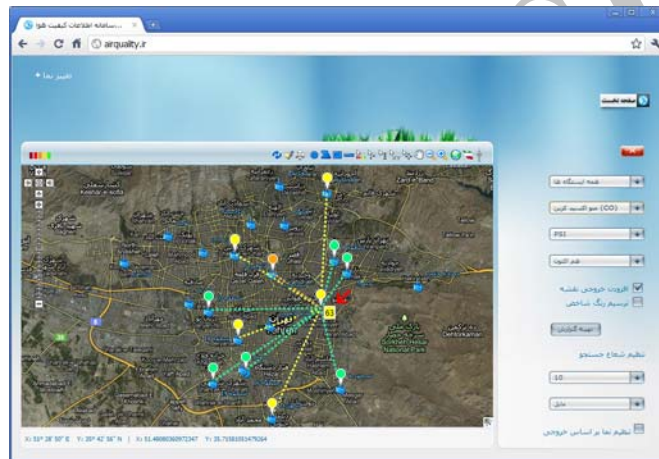
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¹.Geo-reference

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(AQCC, 2010)



WebGIS

WebGIS

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PSI

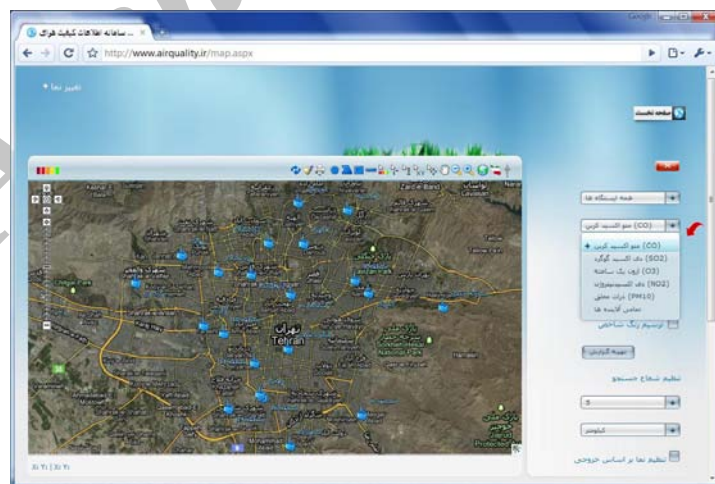
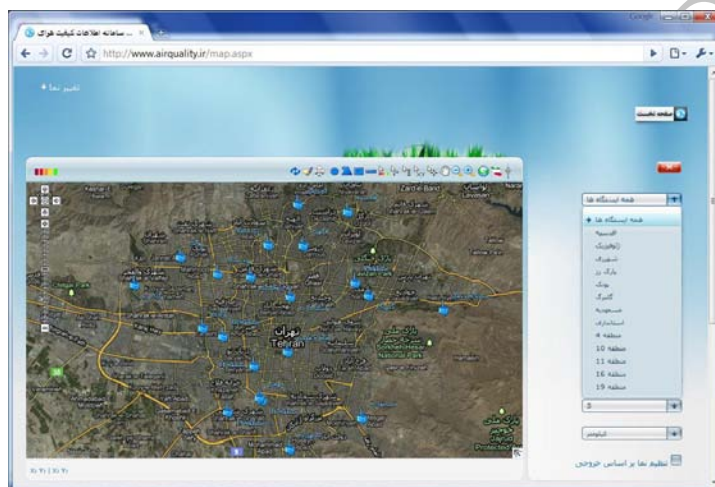
"

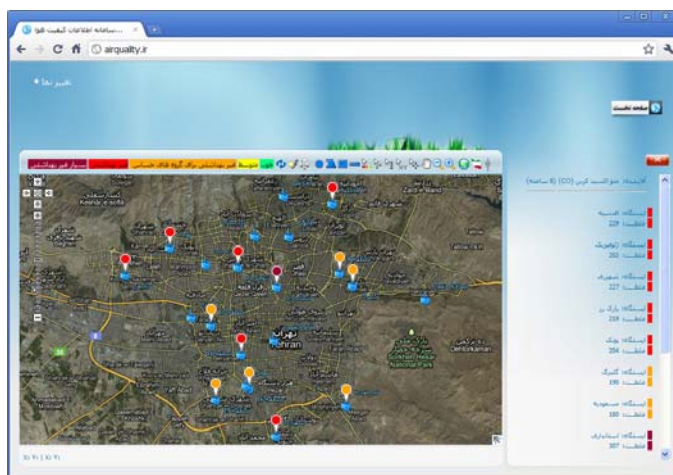
"

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PSI

PSI





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GIS WWW

PSI

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PSI

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web

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Air Quality Information System Using Online WebGIS

F. Atabi*¹, Y. Rashidi², A. Gharagozlo¹ and A. Arabi⁴

¹Assistant Prof., Science and Research Branch, Islamic Azad University, I.R. Iran

²Ph.D. Chemical Engineering, Air Quality Control Company, Tehran Municipality, I.R. Iran

⁴M.Sc., Science and Research Branch, Islamic Azad University, I.R. Iran

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Abstract

Particulate and gaseous emissions of pollutants from industries and auto-exhausts are responsible for rising discomfort, aggravates respiratory and cardiovascular. In this study, a system for air quality information in Tehran city has been developed, using an online Web-based geographic information system. This Web-based GIS application allows users to recognize areas with a potential increase in its air pollution situation. In the developed system, all spatial positions of the monitoring stations are shown in the map of Tehran. Every 15 minutes the system is connected to the CO, NO₂, SO₂, PM₁₀, PM_{2.5} and O₃ data collected in the existing database in Air Quality Control Company through the designed web server. After processing the transmitted data, Pollutant Standard Index (PSI) will be calculated. Then with connecting to the monitoring stations, results will be shown on the Tehran map as graphic web pages and texts.

Keywords: Pollutant standard index (PSI), Geographic information system (GIS), Database, Web service, Online

*Corresponding author: Tel: +989121341702 Fax: +982188710658 E-mail: far-atabi@jamejam.net