MAPPING THE MEDIA IN THE AMERICAS

HOW-TO MANUAL NO. 3 JUNE 2008

Data Gathering Manual: Core Data for the Interactive Maps www.mediamap.info

OVERVIEW

The Mapping the Media in the Americas project utilizes a Geographic Information System (GIS) to display layers of data centered on three main themes: media data, political data, and socio-demographic data for each of the selected countries. These countries represent a snapshot of the main geographical regions across the Americas.

The layers of data are not meant to be displayed all at once; to do so would be a confusing and ineffective use of the powerful functionality of the web-based maps. Instead, the media layers should be activated against either the census or political data to visualize the connections between media publicity, electorate/demographic profile and voting patterns.

Data Collection

To date, the project partners have been navigating through internet sites and have been able to find statistics on recent census and election for each of the countries selected for the project. Ideally, project partners should search the official internet sites of relevant government bodies for both census and election data. Most data is posted online in some form as this type of data is in the public domain. Media data have been somewhat more difficult to obtain, so personal communication with the relevant ministries of communication is required. Spatial data is provided.

It is important to maintain consistency in data collection and database creation for each country for future updates (particularly for media data), and to ensure it is useful for comparative purposes. The following requirements for data gathering and databases are set out below.

1. Spatial Data

The spatial data is the core of this project. Of paramount importance are the administrative boundaries for each country: these ideally should be to the smallest unit possible, so as to minimise the effects of the Modifiable Areal Unit Problem (MAUP)[1] and the Ecological Fallacy[2]. The following table presents an outline of the data we have been using to create the GIS for the Mapping the Media in the Americas Project.

[1] The Modifiable Areal Unit Problem (MAUP) is a potential source of error that can affect spatial studies which utilise aggregate data sources (Unwin, 1996).

[2] The Ecological Fallacy is a situation that can occur when a researcher or analyst makes an inference about an individual based on aggregate data for a group.

Table 1: Spatial Data Required

Spatial Data	Format	Description	Attributes
Country boundary	Polygon .shp	Outline of the country (eg Peru)	OID, country name, shape, area
First Level Admin Boundary	Polygon .shp	Country broken into first division of Admin units (eg Peru: departamentos)	OID, First Admin level name, Unique ID, shape, area
Second Level Admin Boundary	Polygon .shp	First Admin units broken into second division of Admin boundaries (eg Peru: provincias)	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, shape, area
Third Level Admin Boundary	Polygon .shp	Second Admin units broken into third division of Admin boundaries (eg Peru: distritos)	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, shape, area
Primary cities	Point .shp	Location of cities around the country	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, city name, longitude and latitude, population.

2. Media Data

Data about the media in each country: print, broadcast, cable and internet are able to be visualised geographically on the provision there is some locational information within the data, such as the city, district or region. Additional information needs to be recorded along with the location of the media, such as circulation numbers for print media, broadcast reach for radio and television, company ownership and/or family ownership, and political affiliation, if possible.

This enables users to contextualise the access people within a specific country have to various media sources. Ideally, the media contain the following attributes in the following order:

Table 2: Media Data Required

Media Type	Attributes
Radio Stations	Latitude/longitude location, Level of Administration (cities/province/region distribution), address, postal code, name of radio station, call sign, band, frequency, unit of frequency, broadcast class, power, antennae height, type of station (main/repeater), concession holder or licencee, company/family owner, origin of group funds (national or foreign), presence of group in other countries, group interest in other industries, date of licence start, date of licence expiry, date of creation of radio station, language, percentage of programs with official language of country, percentage of national programs, radio station relationship with political party.
TV (Broadcast/Cable)	Latitude/longitude location, Level of Administration (cities/province/region distribution), address, postal code, name of TV station, channel, band, frequency, unit of frequency, broadcast class, power, antennae height, type of station (main/repeater), concession holder or licencee, company/family owner, origin of group funds (national or foreign), presence of group in other countries, group interest in other industries, date of licence start, date of licence expiry, date of creation of TV station, language, percentage of programs with official language of country, percentage of national programs, TV station relationship with political party.
Newspapers and magazines	Latitude/longitude location, Level of Administration (cities/province/region distribution), address, postal code, name of newspaper, type of station (main/repeater), company/group/family owner, origin of group funds (national or foreign), presence of group in other countries, group interest in other industries, date of creation of newspaper, language, newspaper relationship with political party, daily/weekly circulation numbers

Different countries will have different data on media. At this stage it is difficult to determine the true extent of available media for each individual country; specifically, what is collected and by whom.

3. Political Data

Data about the most recent national elections in each country are able to be visualised geographically. Of particular interest to this project are data on: political parties, winning votes, the margin of win, valid votes, number of registered voters and the number of voters that cast ballots. This enables users to see possible associations immediately via the map display of this information. Ideally, the political data contain the following attributes:

Table 3: Political Data Required

Political Data	Attributes
Most recent national election results	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, Shape, Area, Electoral district, winning political parties, winning candidate, total number of votes cast, total number of votes received, percentage of winning votes overall.
National winner political party percentage vote	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, Shape, Area, Electoral district, National Winner (Candidate), National Winner (Party) total number of votes cast, total number of votes received, percentage of votes overall.
National Runner - Up political party percentage vote	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, Shape, Area Electoral district, National Runner - Up (Candidate), National Runner - Up (Party), total number of votes cast, total number of votes received, percentage of votes overall.
Total Polls	Total number of polling booths in each district
Percentage of registered voters	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, Shape, Area, Electoral district, total voting population, total registered voting population, percentage of registered voters overall.
Percentage of voters that cast ballots	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, Shape, Area, Electoral district, total voting population, total registered voting population, total registered population that cast votes, number and percentage of valid, null, blank and rejected votes, percentage of registered voters that cast ballots overall.
Government Political Tendency	Left, centre, right
Observations	Comments
Campaign Finance for each political party	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, Shape, Area Electoral district, Political Party, Total Revenue, Total Expenses, Breakdown of Expenses: $ spent on advertising for radio, TV and newspaper

Because each map will be interactive, users will be able to click on a specific country or area and bring up additional information on registration and voting patterns, as well as information on political finance.

4. Socio-demographic Data

The final group of data focuses on the people of the various countries being mapped. The maps are able to display the dominant characteristics of the population for a geographic region based on census statistics. Ideally, the socio-demographic data contain the following attributes for each country's census results:

Table 4: Socio-demographic Data Required

Census Data	Attributes
Total Population and Density	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, Shape, Area, Raw Count Total Population, Calculated Population Density: Total Pop/Area
Total Voting Population (18 plus)	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, Shape, Area, Raw Count Total Population, Raw Count Population 18 plus, Percentage of Population 18 plus out of Total Population
Level of Education: Secondary and Tertiary	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, Shape, Area, Raw Count Total Population, Raw Count Population with Secondary School completed, Raw Count Population with University completed, Percentage of Population with Secondary Education, Percentage of Population with University Education
Illiteracy	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, Shape, Area, Raw Count Total Population, Raw Count of Population stating Illiteracy, Percentage of Illiterate Population
Primary Languages spoken	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, Shape, Area, Raw Count Total Population, Raw Count of People Primarily Speaking the Three Major Languages of the Country, Percentage of People Primarily Speaking the Three Major Languages of the Country
Indigenous groups	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, Shape, Area, Raw Count Total Population, Raw Count of People Belonging to the Three Major Indigenous Groups of the Country, Percentage of People Belonging to the Three Major Indigenous Groups of the Country
Social Indicator	OID, First Admin level name, Unique ID, Second Admin level name, Unique ID, Third Admin level name, Unique ID, Shape, Area, Raw Count Total Population, Average Income, Median Income, Levels of Social Class, Material of the floor, walls or roof

Evolving Data Methodology

A framework for future data collection and processing has been developed by Dr. Martín Becerra of the Universidad Nacional de Quilmes – Conicet in Argentina.

As each partner is now responsible for the maintenance, further development and enriching of the databases which drive the interactive maps, the methodological document provides a comprehensive overview on how the above might be achieved.

The main areas for future data development focus on:

- Improving the visualization capacity of the online maps – map 'real-estate', tolls and icons.
- Adding specific data layers as the information becomes available for each individual country.
- Consistent updating and standardization of media data.

Please refer to the Data Methodology Document, accessible on the www.mediamap.info website and resources page.

Possible Other Data Sources:

Obtaining information on elections or the media system in Latin America can be more complex than in North America: there is no tradition of transparency for State or Media.

Information exists from the UN agencies (UNDP, ECLAC) or the OAS. Institutions such as the World Bank and the International Development Bank also have statistical information and data relative to social, economic and human development in the region.

At the same time, and to sort out the difficulties present for each country, below is a list of sources that could be used to complete the data relative for the media system for each country:

- Official organizations (Census and Statistical Institutes, Economic Ministers, Cultural Secretaries, Organizations for the application and control of the Media and Cultural and Info-Communicational Industries).
- Chambers for Public announcement and public spending reports in each sector.
- Working unions for each sector.
- Company web pages and institutional material in each sector.
- Interviews with authorities and significant actors in each sector.
- Manuals and International and National yearbooks on the Media or particular sectors (Zenith Media Book).
- Published academic works.
- Journalistic Information (daily newspapers, magazines, newsletters and journals).

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