Querying Oracle from Client Applications

Outline

(1) Linking ArcView to external database engines
   - SQL Connect and Database connectivity extensions
   - Solving the MA population density problem (from the first lecture)
   - Mapping zoning variances (preview of Lab #5)

(2) Creating 'pin maps' from tabular X/Y data (preview of Lab #5)
   - Event themes in ArcView
   - Converting lat/lon data - zoning and EPA envirofacts examples
   - Projecting zoning data to Mass State Plane coordinates

MA Density Example

<<Use SQL in Oracle to handle one-to-many problems that arise because the population total for each town is associated with each of the polygons (such as Boston islands) that comprise a Massachusetts Town.>>

sqlplus
connect zoning/xxxx

<<examine selected columns from matowns2000, brought into Oracle by exporting from ArcView into INFO table and using ArcInfo connection to Oracle>>

describe matowns2000
<table>
<thead>
<tr>
<th>Name</th>
<th>Null?</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREA</td>
<td></td>
<td>NUMBER(63)</td>
</tr>
<tr>
<td>TOWN_ID</td>
<td></td>
<td>NUMBER(38)</td>
</tr>
<tr>
<td>TOWN</td>
<td></td>
<td>VARCHAR2(21)</td>
</tr>
<tr>
<td>POP80</td>
<td></td>
<td>NUMBER(38)</td>
</tr>
<tr>
<td>POP90</td>
<td></td>
<td>NUMBER(38)</td>
</tr>
<tr>
<td>POP_CH</td>
<td></td>
<td>NUMBER(38)</td>
</tr>
</tbody>
</table>

create view matown2000tot as
select town_id, town, max(pop90) pop90, sum(area) area,
     10000*max(pop90)/sum(area) pop_hect
from matowns2000
where town_id > 0
group by town_id, town;

<<pull this View into ArcView using SQL Connect>>