

# Prostorové dotazování

- Atributový dotaz
- Prostorový dotaz
  - Prostorový predikát
  - Prostorová operace
  - Logické spojky
- Prostorové spojení
- SQL for MM (odvozeno ze SF for SQL)

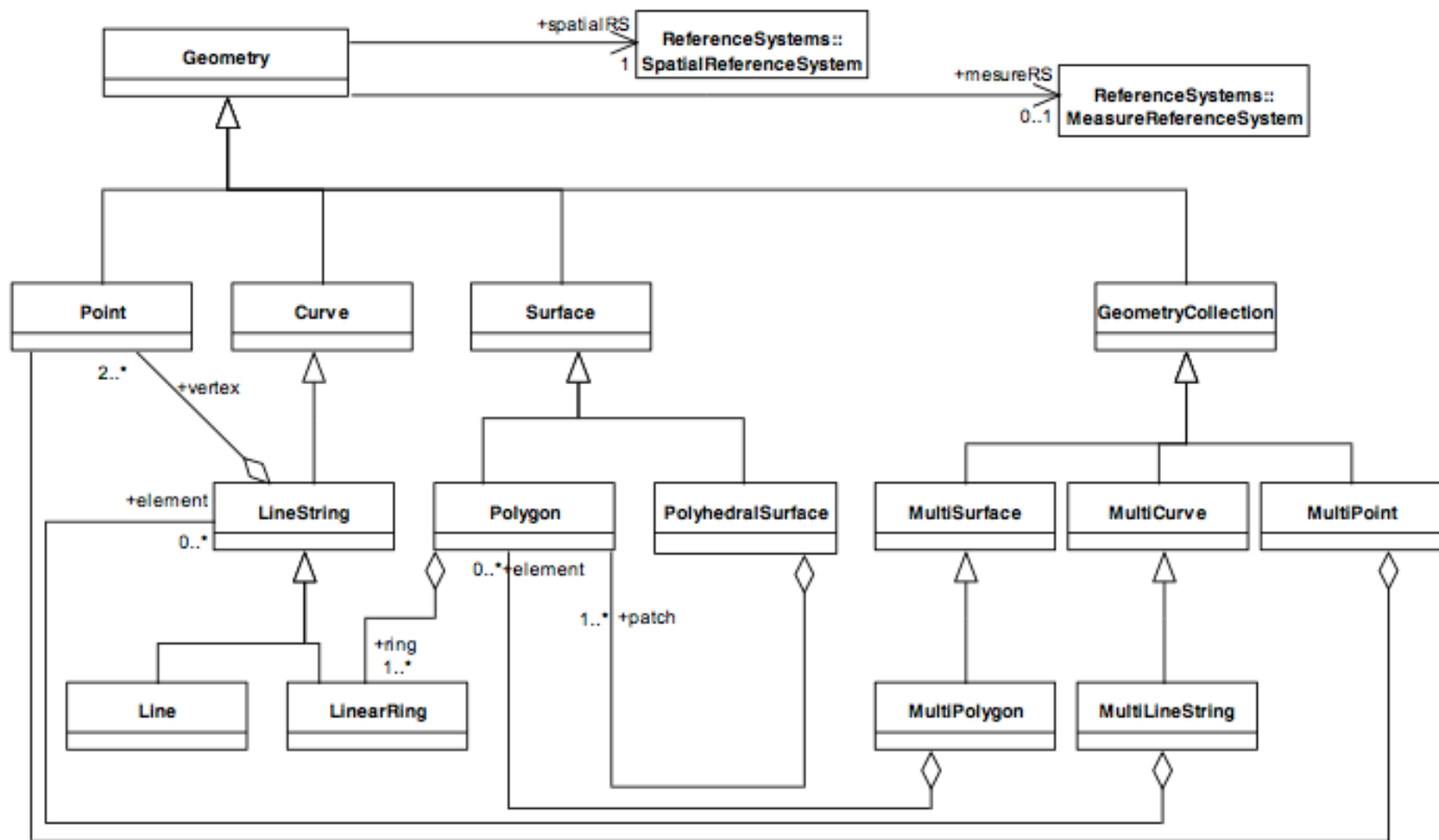
# Atributový dotaz

- Sloupec
- Hodnota
- Predikát
- Logická spojka
- Funkce

VEGETATION = 'Pine Forest' AND AREA(Geometry) > 100


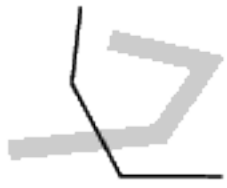


# Prostorový dotaz





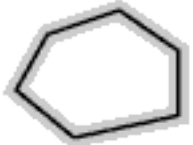
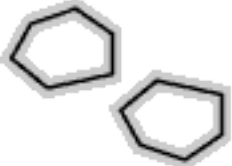
- Definiční
- Výběr
- Zdrojová vrstva(tabulka) \* Selekční vrstva(tabulka)
- Výběry je možné spojovat
  - Přidat, odebrat, výběr z výběru



# Crosses

















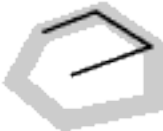

# Equals

	
multipoint / linestring	Linestring / Linestring
	
multipoint / polygon	linestring / polygon

	
point / point	multipoint / multipoint
	
linestring / linestring	multistring / multistring
	
polygon / polygon	multipolygon / multipolygon






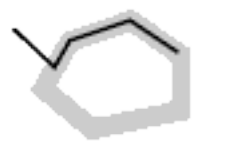
# Contains




# Within

		
multipoint / point	multipoint / multipoint	polygon / multipoint
		
linestring / point	linestring / multipoint	linestring / linestring
		
polygon / point	polygon / linestring	polygon / polygon
		
point / multipoint	multipoint / multipoint	multipoint / polygon
		
point / linestring	multipoint / linestring	linestring / linestring
		
point / polygon	linestring / polygon	polygon / polygon

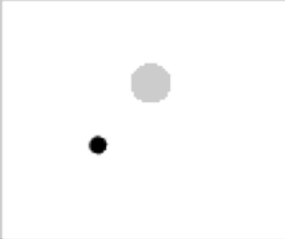

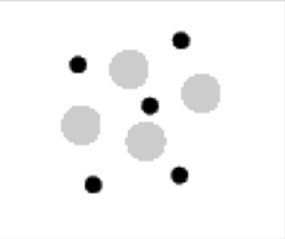





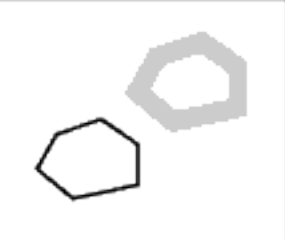
# Touches

# Overlaps

		
point / linestring	multipoint / linestring	linestring / linesetring
		
point / polygon	multipoint / polygon	linestring / polygon

		
multipoint / multipoint	linestring / linesetring	polygon / polygon










# Disjoints (negace Intersects)







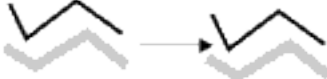


		
point / point	point / multipoint	multipoint / multipoint
		
point / linestring	multistring / linestring	polygon / linestring
		
point / polygon	multipoint / multipolygon	polygon / polygon



# Difference

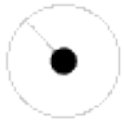
# Union

 <p>point / point → ∅</p>	 <p>point / point → multipoint</p>	 <p>point / multipoint → multipoint</p>
 <p>multipoint / multipoint → ∅</p>	 <p>multipoint / multipoint → multipoint</p>	 <p>linestring / linestring → multilinestring</p>
 <p>linestring / linestring → ∅</p>	 <p>polygon / polygon → ∅</p>	 <p>polygon / polygon → polygon</p>

 <p>point / point → multipoint</p>	 <p>point / point → multipoint</p>	 <p>point / multipoint → multipoint</p>
 <p>multipoint / multipoint → multipoint</p>	 <p>multipoint / multipoint → multipoint</p>	 <p>linestring / linestring → multilinestring</p>
 <p>linestring / linestring → multilinestring</p>	 <p>polygon / polygon → multipolygon</p>	 <p>polygon / polygon → multipolygon</p>

# Buffer

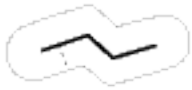
# Convex hull



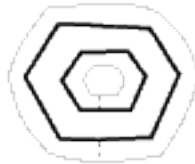
Buffering a point



Buffering a multipoint



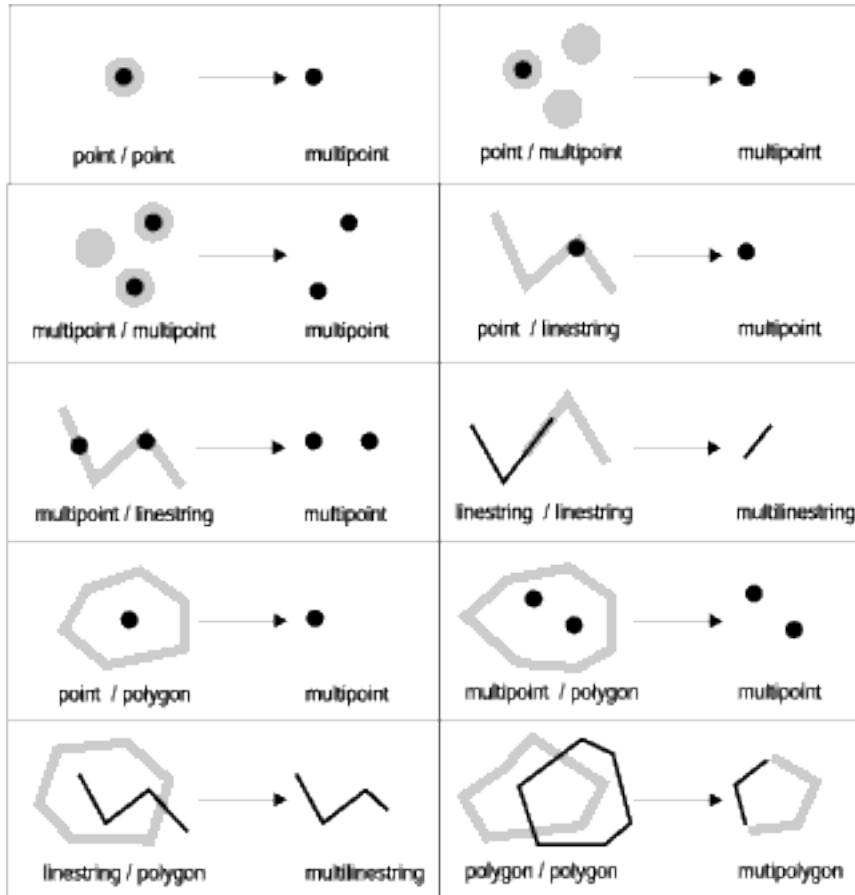
Buffering a linestring



Buffering a polygon with one interior ring



# Intersection



# Manipulace s geometrií

Point	<p>X() Y() Z() M() —</p>	<p>ST_Point() ST_X() ST_Y() ST_Z() ST_M() ST_ExplicitPoint()</p>	<p>Return the Point Return the <i>X</i>-coordinate of point Return the <i>Y</i>-coordinate of point Return the <i>Z</i>-coordinate of point Return the <i>M</i>-coordinate of point —</p>
Curve	<p>Length() StartPoint() EndPoint() IsClosed() IsRing() —</p>	<p>ST_Length() ST_StartPoint() ST_EndPoint() ST_IsClosed() ST_IsRing() ST_CurveToLine</p>	<p>Return the length of curve Return the first Point of curve Return the last Point of curve Check whether curve is closed Check whether curve is closed and simple Transform Curve to LineString</p>
LineString	<p>— — NumPoints() PointN()</p>	<p>ST_LineString ST_Points ST_NumPoints ST_PointN</p>	<p>Return the LineString Return a collection of points Return the number of points Return a Point containing Point <i>n</i> of LineString</p>

# Funkce

- Area, length
- Distance
- As
- Simplify, transform, flip ...
- Extent
- Along