LArSoft - Feature #14364

Milestone # 14363 (Assigned): Support detectors with drift direction different than x axis

Build a geometry infrastructure for support of arbitrary drift direction

11/02/2016 02:41 PM - Gianluca Petrillo

Status:	Closed	**Start date:**	11/04/2016
Priority:	Normal	**Due date:**	
Assignee:	Gianluca Petrillo	**% Done:**	100%
Category:	Geometry	**Estimated time:**	0.00 hour
Target version:		**Spent time:**	136.00 hours
Experiment:	-	**Co-Assignees:**	

Description

Geometry interface should be mostly unchanged (as much as possible).
Users should not have to know which the drift direction is, but should also not assume any.

Subtasks:

Task # 14366: Geometry wire intersection computation is not interoperable with respect ...	**Closed**
Task # 14705: Preparatory work for drift direction support	**Closed**

Related issues:

Blocked by LArSoft - Bug #14365: Plane geometry object hosts readout information	**Closed**	**11/02/2016**	**11/07/2016**
Blocks LArSoft - Support #15100: Need faster NearestWire look up method	**Closed**	**01/11/2017**	

History

#1 - 11/02/2016 02:46 PM - Gianluca Petrillo

Given that:

- the actual drift direction is experiment dependent
- I want multiple implementation to have optimised code reflecting the specific geometry of a detector

the only component that is experiment-specific is the channel mapping. Not to be tightly bound to it, the facility describing the drift direction will be encapsulated in a single object. The GeometryCore algorithms will refer to that one object once the channel mapping algorithm has delivered it. In this way, a future redesign moving the drift direction information (which has nothing to do with channel mapping) will have an easier task.

#2 - 11/02/2016 02:48 PM - Gianluca Petrillo

Thanks to the support of DUNE Dual Phase people (Vyacheslav Galymov, Robert Sulej), I have created a DUNE Far Detector Dual Phase geometry which is not rotated.
This will be the test bench for the new code.

#3 - 11/02/2016 03:14 PM - Gianluca Petrillo

- Blocked by Bug #14365: Plane geometry object hosts readout information added

#4 - 01/23/2017 10:38 AM - Lynn Garren

- Blocks Support #15100: Need faster NearestWire look up method added

#5 - 06/14/2017 01:48 PM - Gianluca Petrillo

- Status changed from Assigned to Resolved

Work has been completed (see subtasks).

#6 - 06/14/2017 01:48 PM - Gianluca Petrillo

- Status changed from Resolved to Closed