

# INSTRUMENT DRIVERS

BY

CATHERINE VENTURINI

AEA LABVIEW USER GROUP

[HTTP://WWW.AEACLUBS.ORG/LABVIEW](http://www.aeacclubs.org/labview)

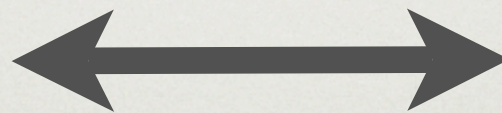
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# WHAT IS AN INSTRUMENT DRIVER?

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Computer software that offers an easy way for users to control and communicate with an instrument



GPIB, TCP/IP,  
RS-232, USB, ...





# GOOD!

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**DONE!**

Instrument  
or  
Hardware

Computer Software  
or  
Instrument Driver



# NOT GOOD!

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Instrument  
or  
Hardware



Computer Software  
or  
Instrument Driver

!\*?!\*!



# COMPONENTS TO AN INSTRUMENT DRIVER

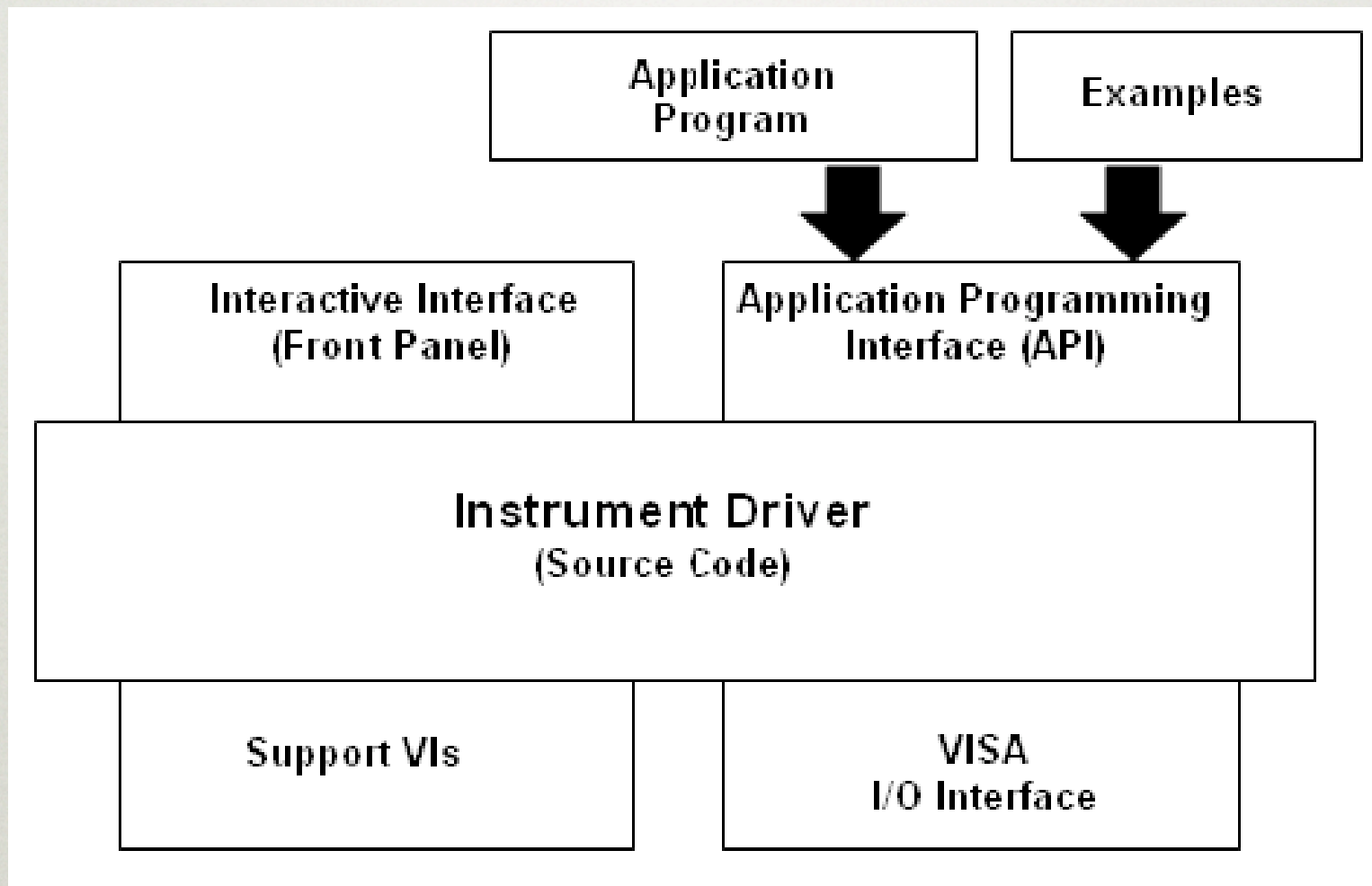
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- Knowledge of how the instrument works
- Consistent, modular design
- Ease of use for the user
- External Structure
  - High-level Application Program and Examples
- Internal Structure
  - Low-level API's and I/O interface



# EXTERNAL STRUCTURE OF AN INSTRUMENT DRIVER

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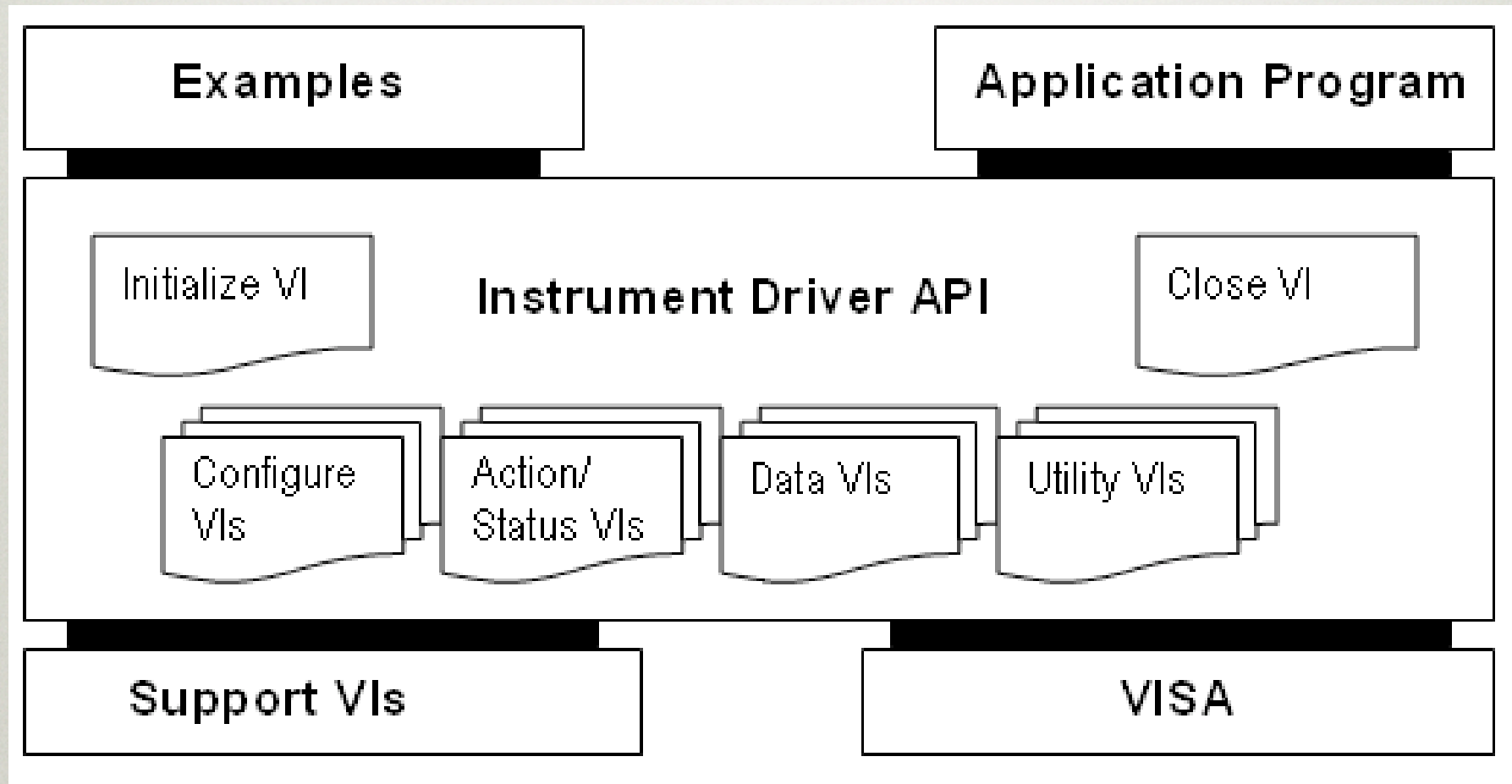


From National Instruments Tutorial:

[“Developing LabVIEW Plug and Play Instrument Drivers”](http://ni.com) on ni.com

# INTERNAL STRUCTURE OF AN INSTRUMENT DRIVER

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From National Instruments Tutorial:

[“Developing LabVIEW Plug and Play Instrument Drivers” on ni.com](http://ni.com)



# **BUILD YOUR OWN INSTRUMENT DRIVER**

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LabVIEW 8 Instrument Driver Wizard Demo



# FURTHER INFORMATION

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- National Instrument Driver Network
  - <http://ni.com/idnet/>
- AEA LVUG Wiki Site:
  - <http://bass.aero.org/ecd-bin/view/LabVIEW>