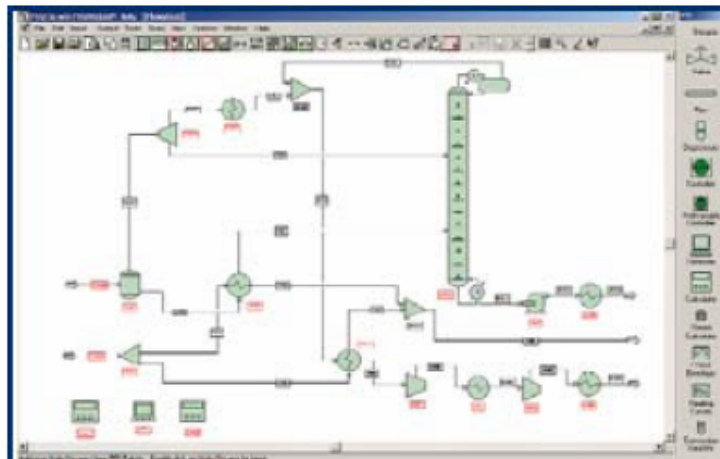


PRO II Training

7 Basic Steps

- 1 – Draw Your Flowsheet
- 2 – Define your components
- 3 - Select Your Thermodynamic Calculation Methods
- 4 – Define Your Streams
- 5 – Define Your Units
- 6 – Run Your Simulation
- 7 – Review Your Results

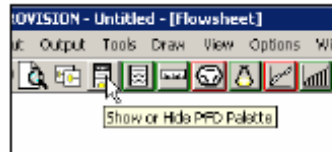
Step 1 – Draw Your Flowsheet



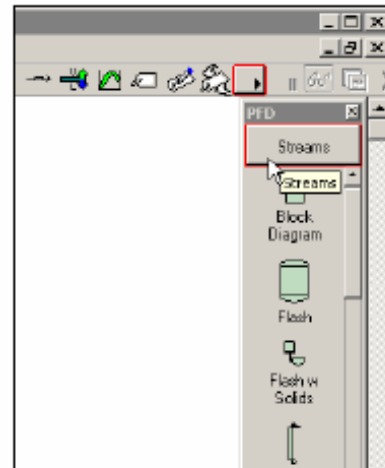
- Open Pro/II
- Click “New”



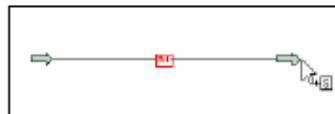
- Click “Show or Hide PFD Palette”



- Choose “Streams” from Palette →

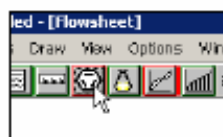


- Red means ‘incomplete/didn’t work’
- Blue means ‘complete/good’
- Yellow means ‘warning’
- Draw a stream – a SIMPLE system

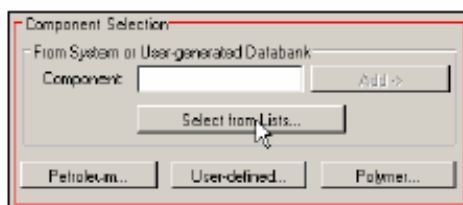


Step 2 – Define your components

Push the **RED** “Component Selection” button

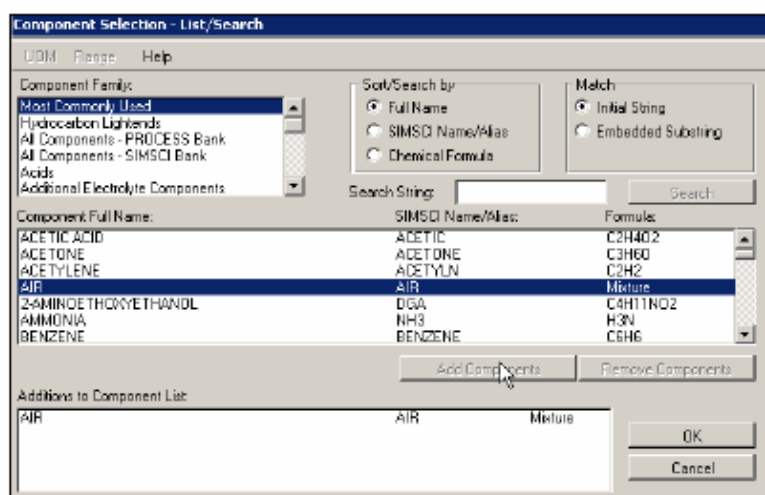


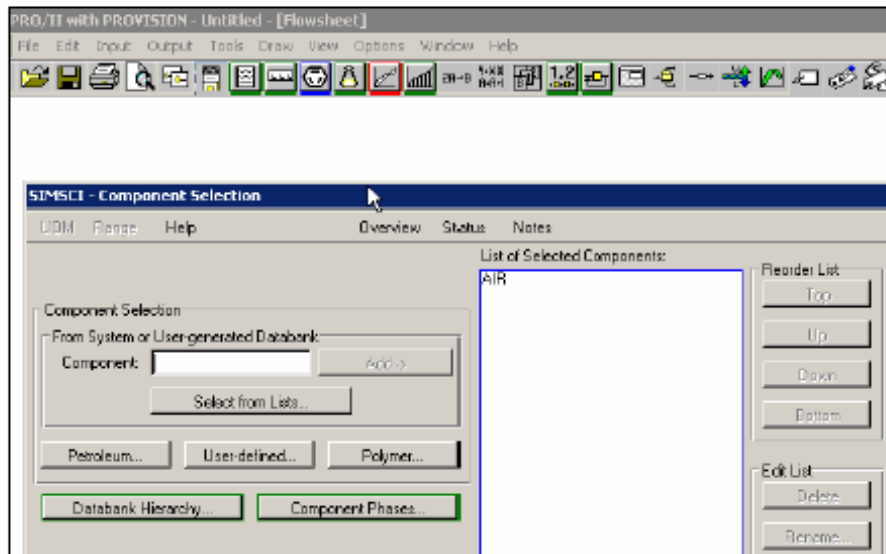
Push “Select from lists...”; notice the **red**



Highlight “Most Commonly Used” component family and choose “AIR”

Click “Add component” and “OK”

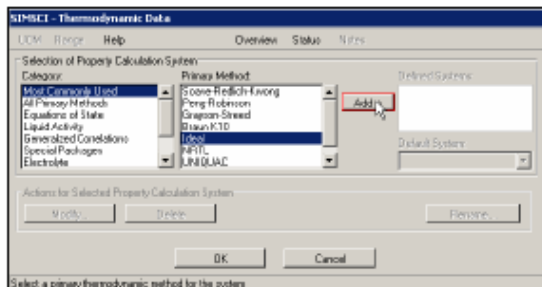




BLUE means done!!!

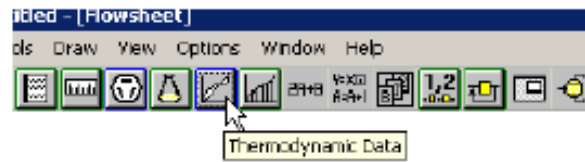
Step 3 - Select Your Thermodynamic Calculation Methods

- Click the *other* RED button



Choose Ideal Gas Law:

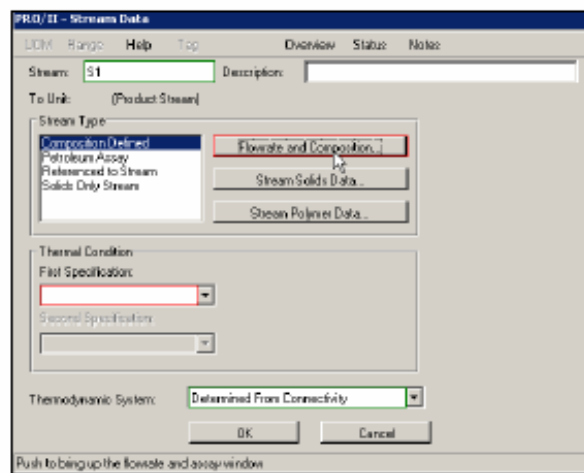
- Highlight “Most Commonly Used”
- Choose “Ideal”
- Click “Add” and “OK”



BLUE means done!!!

Step 4 – Define Your Streams

- Double click the stream



- And fill in things in RED

- Specify the Temperature to be 25°C

Thermal Condition

First Specification:

Temperature F

Second Specification:

- Notice the unit conversion!
(go to UOM)

- Specify the Pressure to be 1atm

Thermal Condition

First Specification:

Temperature C

Second Specification:

Pressure atm

- Define Flowrate ...

[illegible]

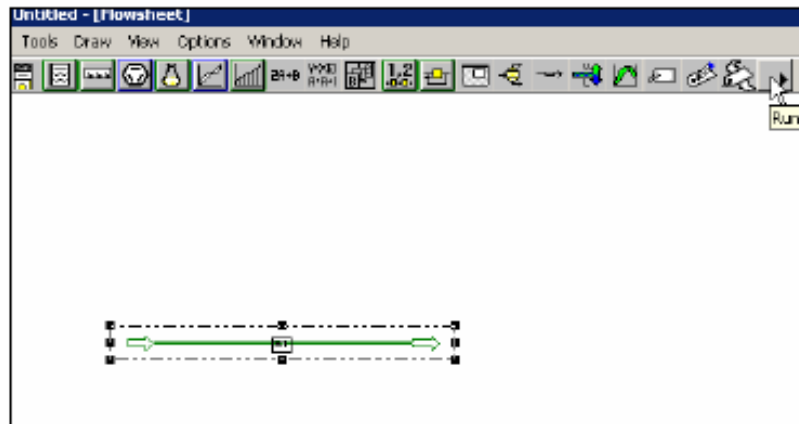
100 gmol/min

Note: mass & volumetric flowrates are also in UOM

- ...and composition (must add up to 1 or 100)

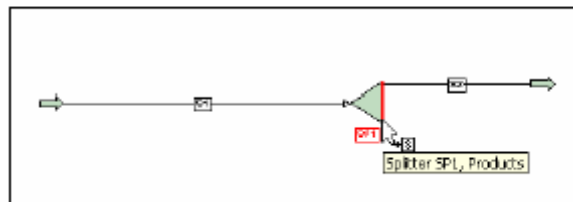
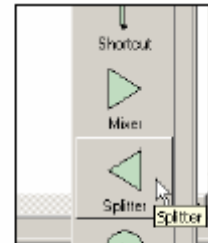
Component	Composition Mole
AlF ₃	7

- The stream is no longer red
- All buttons are blue
- Run button is no longer red

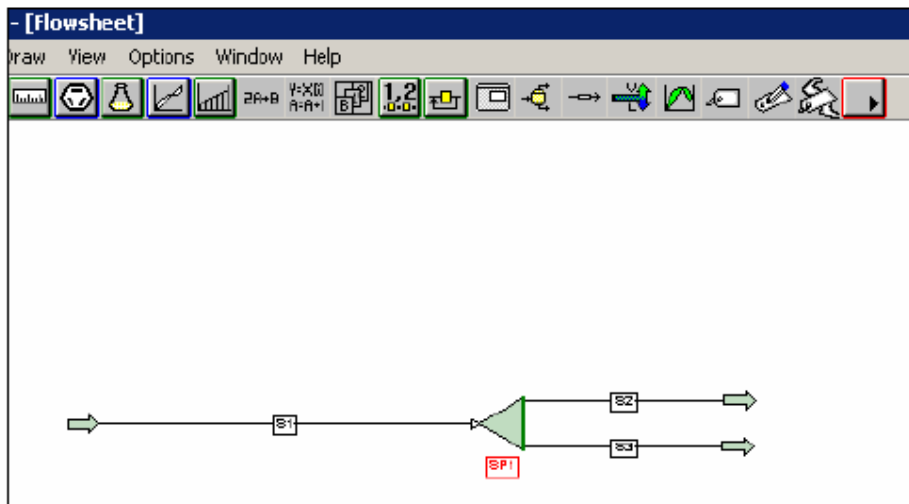


Step 5 – Define Your Units

- Choose a “Splitter” from palette
- Place it in your flow sheet
- Attach the stream to it

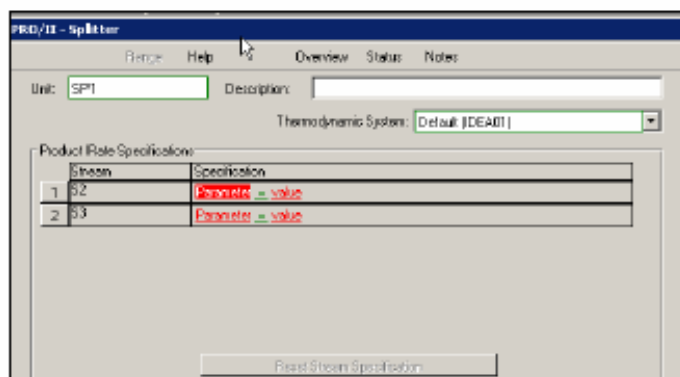


- And add some output streams

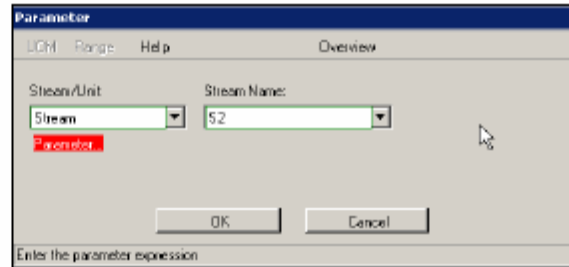


Pro/II will calculate the output streams, but the simulation is **RED**...

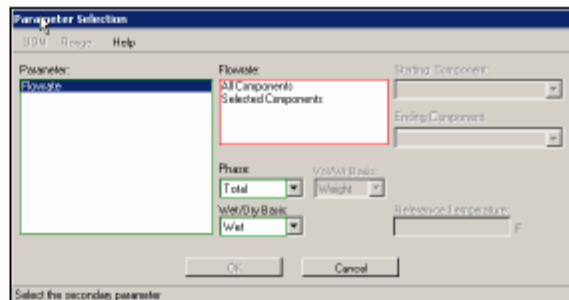
- Double click the **RED** splitter



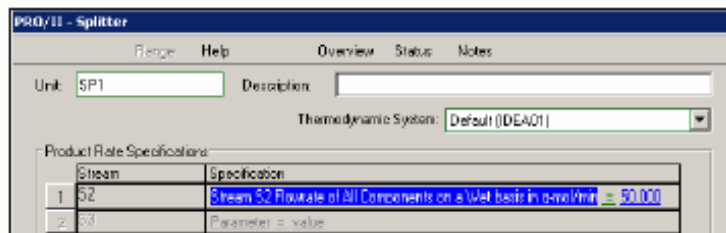
- Click on “Parameter”



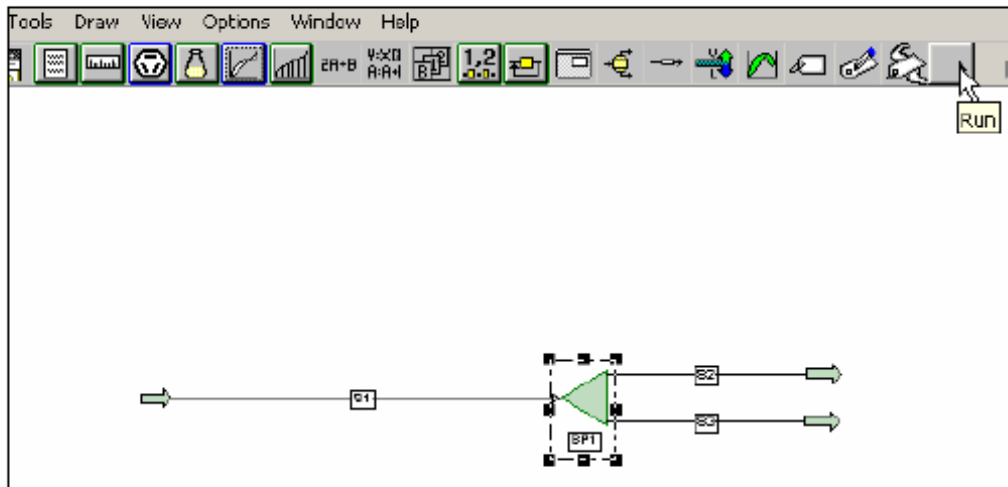
- And click on “Parameter” again.



- Choose “All components” and click “OK”,
- Change units to gmol/min and click “OK”, again.

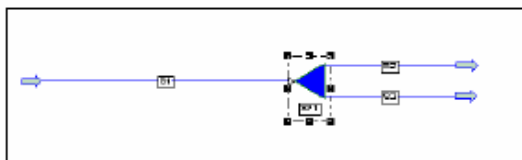


- Enter the value '50' to the right of ‘=’
this splits the stream in half



Step 6 – Run Your Simulation

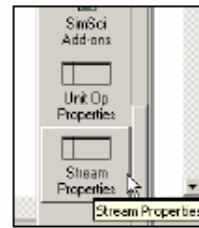
- Push the “Run” button and watch your simulation turn **BLUE**



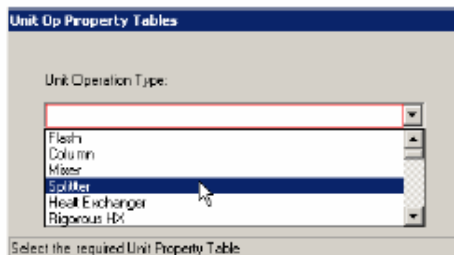
Ways to Look at Results:

- Create a Table
- Generate Report
- Right Click on Unit of Interest

- Choose a “stream properties” table from palette



- By analogy add a “Unit Ops” table (select a Splitter from given options)

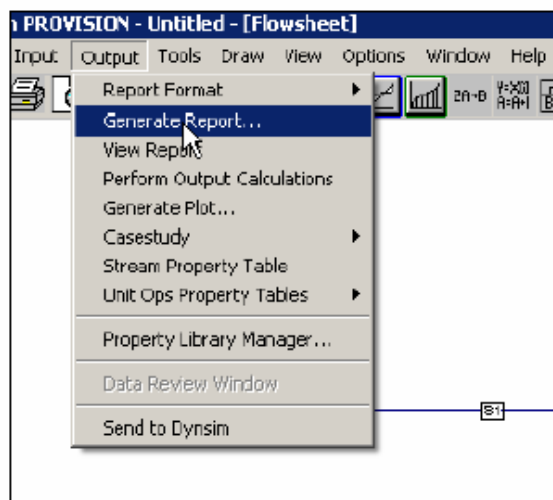


Stream Name		S2	S3
Stream Description			
Phase		Vapor	Vapor
Temperature	F	77.000	77.000
Pressure	PSIA	14.696	14.696
Flowrate	LB-MO L/H.R.	6.614	6.614
Composition			
AIR		1.000	1.000

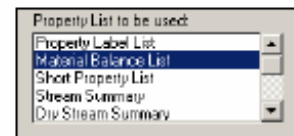
Splitter Name		SP1
Splitter Description		
Temperature	F	77.0000
Pressure	PSIA	14.6966

Unit Ops table is analogous to stream table

- **Alternatively Generate a more detailed report**



- **Choose b/w different stream table types**



- **Selectively add all or some streams to the table**

