

# SBOL Visual: Standard for synthetic biology diagrams

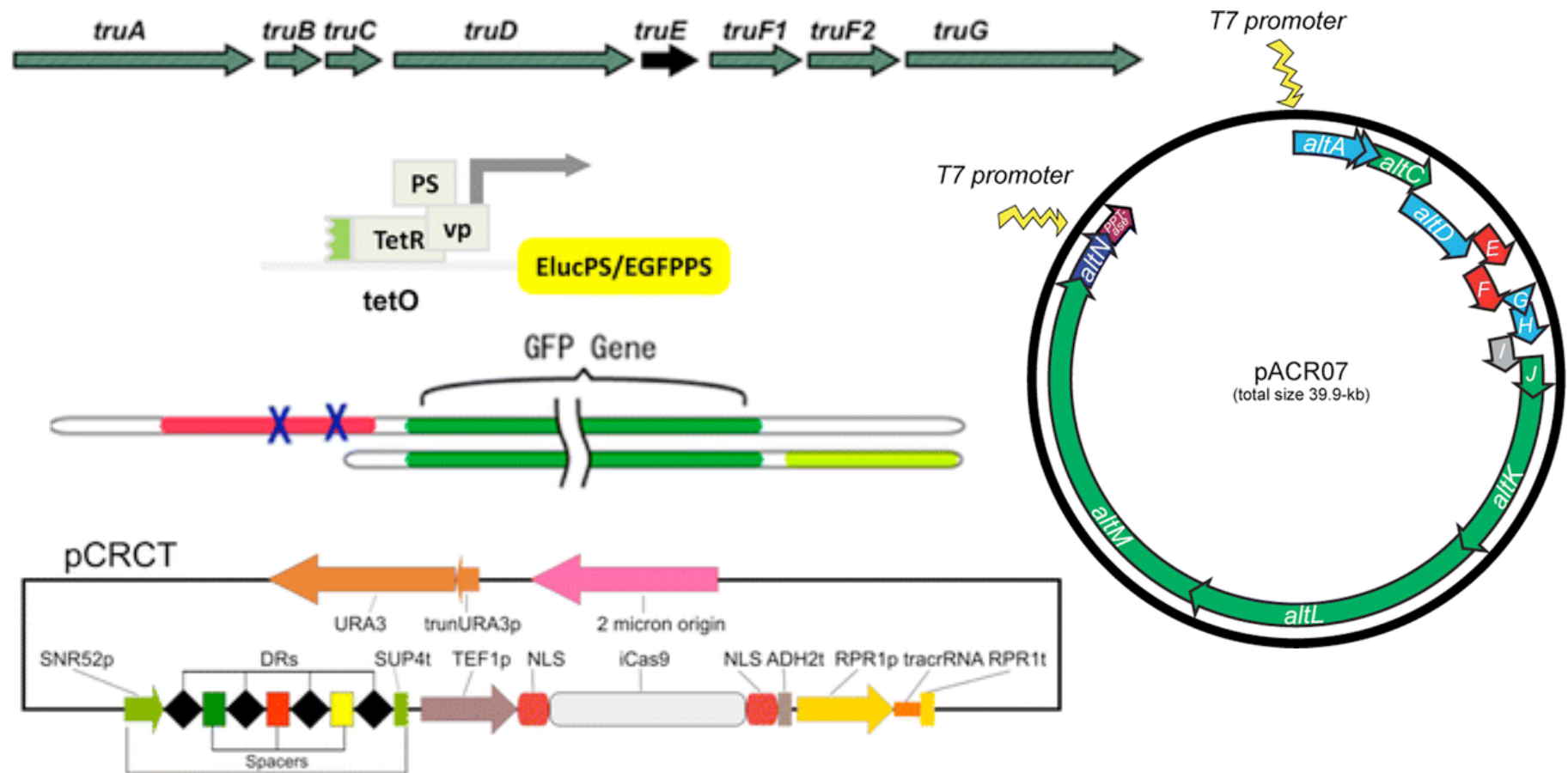
*Jacob Beal*

SynBERC Fall Retreat  
Sept. 2014



# Problem: Communicating Gene Constructs

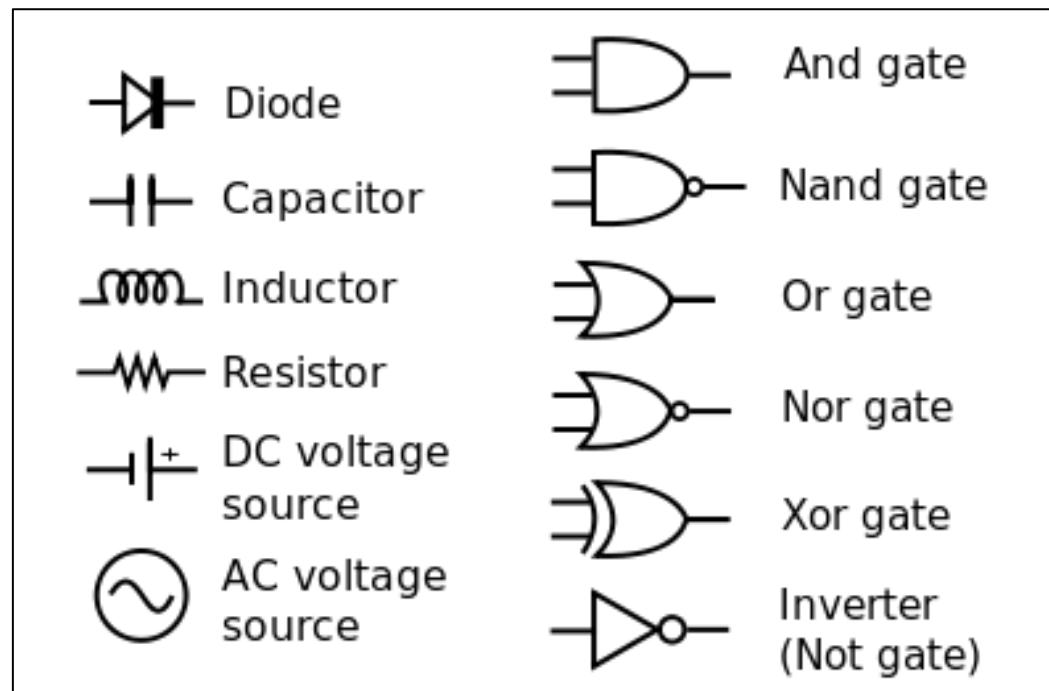
*Construct diagrams from recent ACS Syn.Bio. papers:*



*Well, they're sort of similar...*

# Standards simplify communication

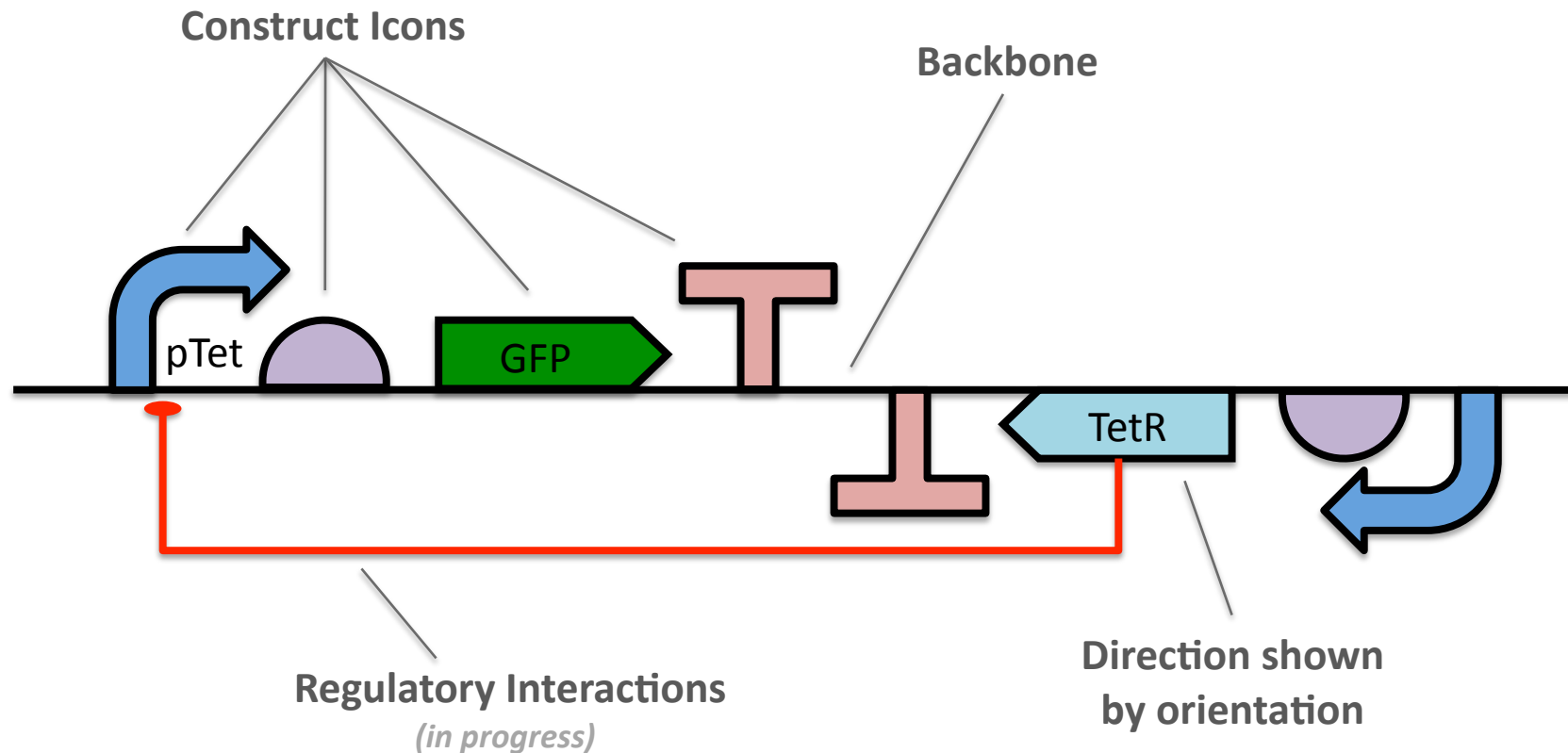
## Inspiration: Standard Electronic Symbols:



... and many others in IEEE Std. 91/91a; IEEE Std. 315

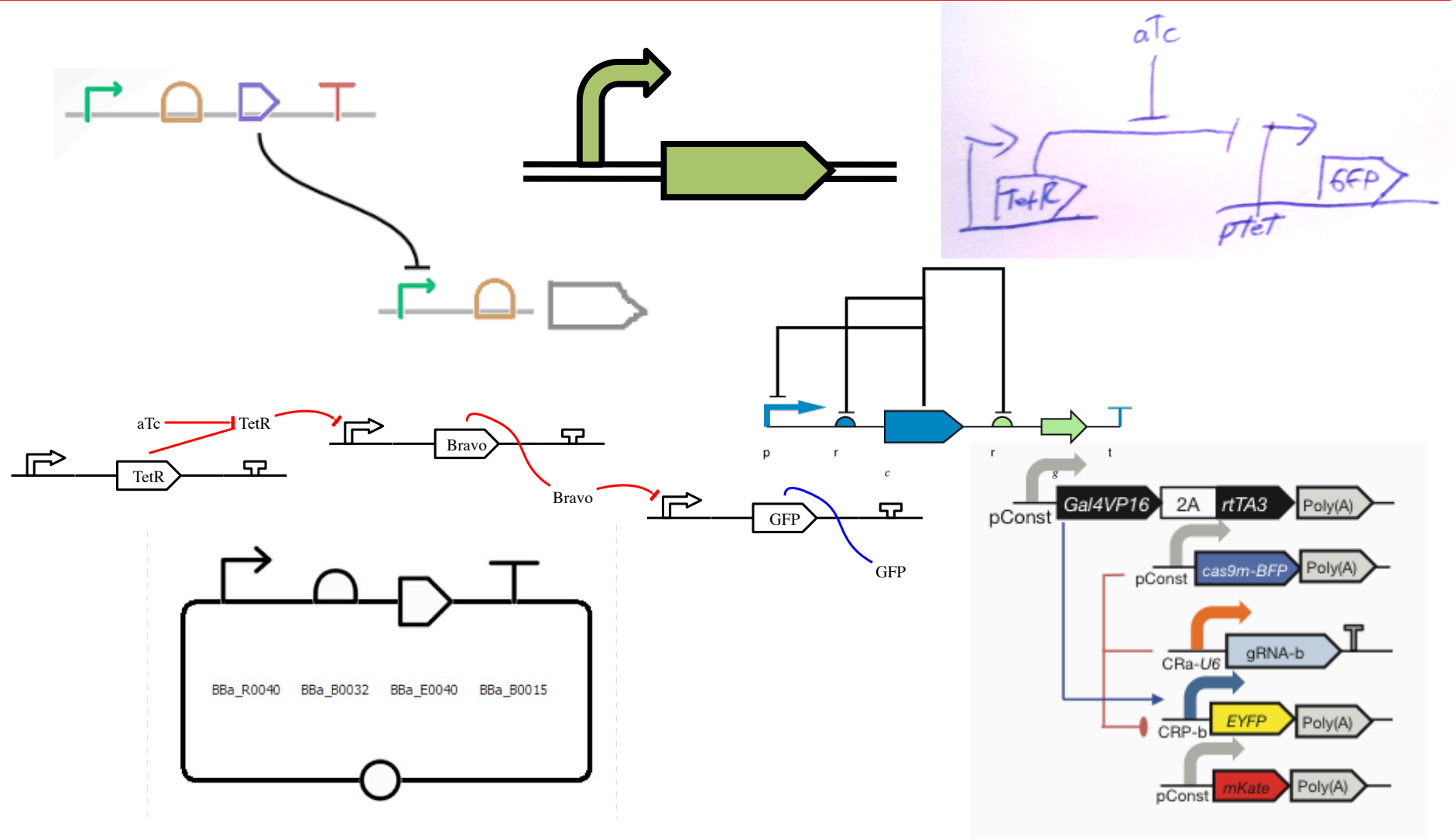
*What is the equivalent for synthetic biology?*

# SBOLv



Synthetic Biology Open Language - Visual  
Community standards in development since 2008  
SBOL Visual 1.0: BBF RFC #93 [doi: 1721.1/78249](https://doi.org/10.17211/78249)  
(Prior versions: BBF RFC #68, #16)

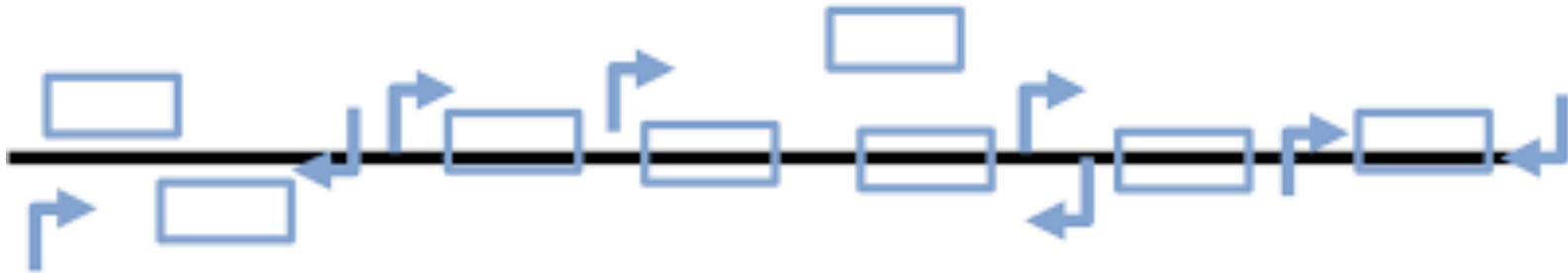
# Flexibility of Style



*Color, Text, Scaling, Strands: all your choice*






















# Is anything prohibited?

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**Yes.**

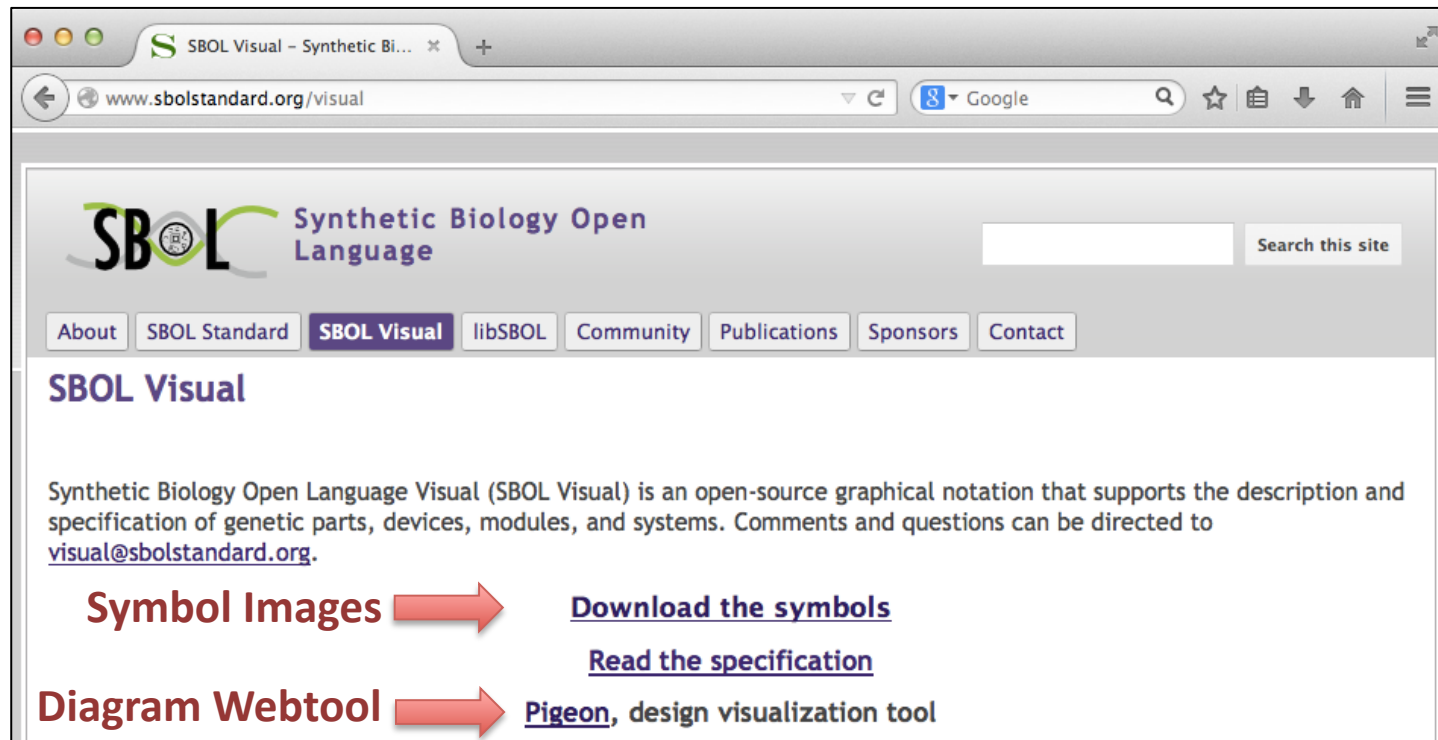
# Current SBOLv Symbols:

 promoter	 primer binding site
 cds	 restriction site
 ribosome entry site	 blunt restriction site
 terminator	 5' sticky restriction site
 operator	 3' sticky restriction site
 insulator	 5' overhang
 ribonuclease site	 3' overhang
 rna stability element	 assembly scar
 protease site	 signature
 protein stability element	 user defined
 origin of replication	

*New symbols added on community consensus*

# http://sbolstandard.org

- Use the symbols in your papers & talks
- Contribute opinions, use cases, new symbols



- Community is open for anyone to join