THE NEXT ITERATION OF YOUR GUI

PEP 342 (Coroutines via Enhanced Generators)
PEP 380 (Syntax for Delegating to a Subgenerator)
WHAT'S GOING ON

interaction
TRADEOFFS

testability

simplicity of development

user friendliness
TRADEOFFS

user friendliness
• use a progress indicator
• provide a cancel button
• respond to events
• similar controls as in other places

USER FRIENDLINESS
OSX human interface guidelines
USER FRIENDLINESS

Multithreaded toolkits - A failed dream?
Graham Hamilton

https://weblogs.java.net/blog/kgh/archive/2004/10/multithreaded_t.html
TRADEOFFS

simplicity of development
TRADEOFFS

testability
TRADEOFFS

testability
EXAMPLE APPLICATION

process pickinglist
example application

PROCESS PICKINGLIST

step one. scan items in warehouse
example application

PROCESS PICKINGLIST

step two. import scanned lines
example application

PROCESS PICKINGLIST

step two. import scanned lines
### Example Application

#### Process Picking List

- **Step three. Verify import data**

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<th>Omschrijving</th>
<th>Gescand</th>
<th>Besteld</th>
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<th>Geleverd</th>
<th>Klantnummer</th>
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example application

PROCESS PICKINGLIST

possible issues. freeze
example application

PROCESS PICKINGLIST

possible issues. exceptions
example application

PROCESS PICKINGLIST

show and tell
THE COMPETITION
THE COMPETITION
TRADEOFFS

user friendliness
TRADEOFFS

testability
TRADEOFFS
simplicity of development
THE COMPETITION
TRADEOFFS

user friendliness
TRADEOFFS

testability
TRADEOFFS
simplicity of development
BALANCE

testability

simplicity of development

user friendliness

Java

java
PYTHON
unique language features
PEP 255

Simple generators
PEP 342
Coroutines via Enhanced Generators
1. Redefine `yield` to be an expression
2. Add a new send() method
3. Add a new throw() method
4. Allow "yield" to be used in try/finally blocks

PEP 342
Coroutines via Enhanced Generators
PEP 342
An application as a series of action steps
PEP 342
EXAMPLE APPLICATION
select a file
• ChangeObject
• ChangeObjects
• PrintChart
• PrintPreview
• PrintHtml

• PrintJinjaTemplate
• OpenFile
• OpenStream
• OpenJinjaTemplate
• CloseView
• MessageBox

• PrintJinjaTemplate
• OpenFile
• OpenStream
• OpenJinjaTemplate
• CloseView
• MessageBox

• Refresh
• OpenFormView
• ShowPixmap
• ShowChart
• SelectFile
• SelectObject

ACTION STEPS
out of the box in Camelot
EVENT LOOP INTEGRATION

Using multiple threads to prevent freezes
import data

event loop integration

EXAMPLE APPLICATION
EXCEPTIONS

wait ... what?
EXAMPLE APPLICATION

user cancels import
• get_collection
• get_selection
• get_object

WHAT'S THE CONTEXT

obligatory xkcd comic
TESTABILITY
UNITTESTING
example application in action and code ...
THE SWEET SPOT
BALANCE

python (camelot)
PEP 380

deleagting to a subgenerator
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Thanks!
Questions?

We’re hiring!

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