

Automatic Success: Teaching Advanced Process Automation to Undergraduate Graphic Communications Students

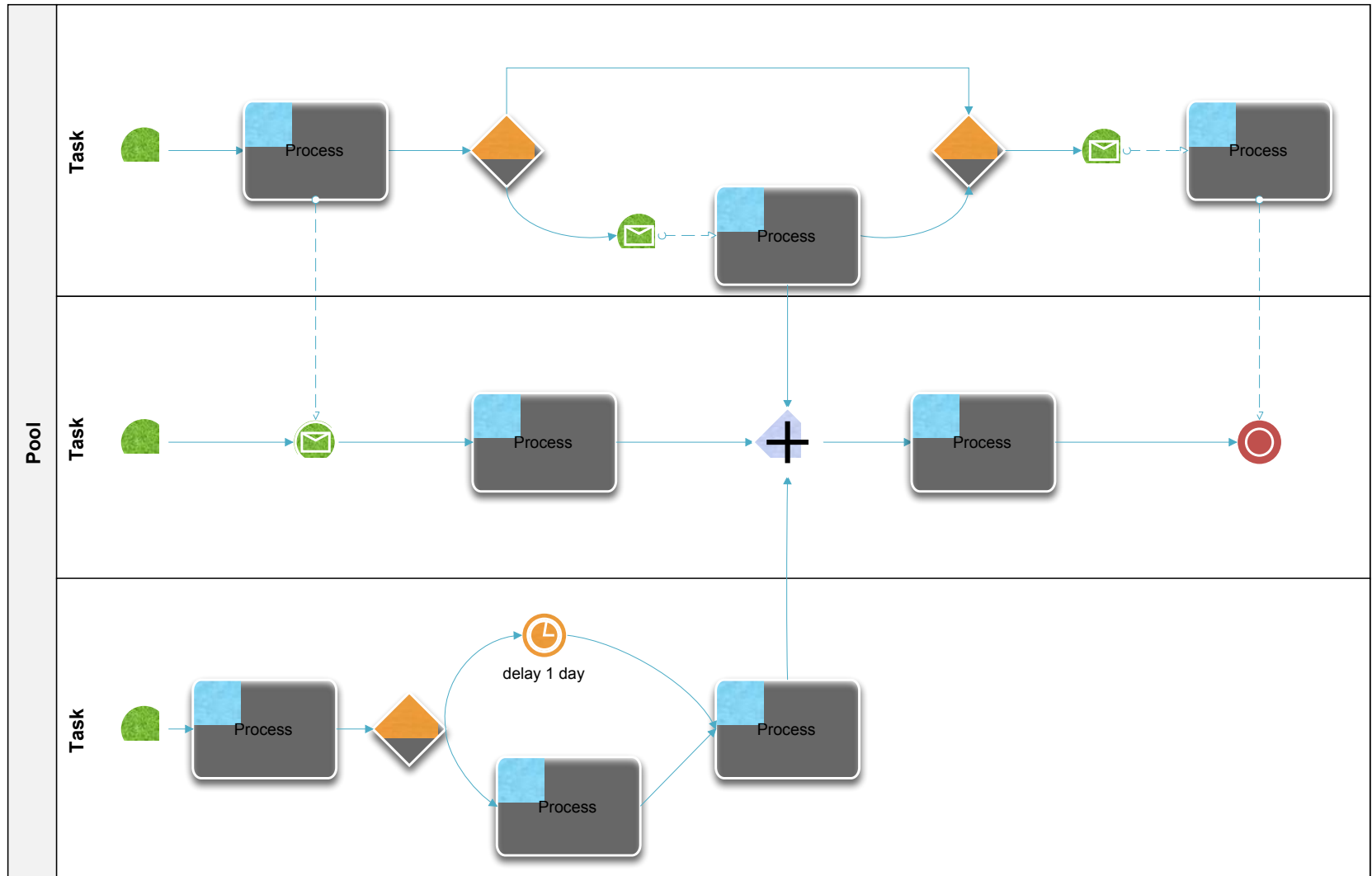
a pedagogical approach used to teach undergraduate students advanced workflow and process automation

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Agenda for Today

- Relevance
 - Industry Trends
 - Skills & Tech
- Pedagogical Approach
- Future

Definitions - Workflow



Industry Trends

“print is now competing with alternative digital channels in the marketing mix and many of them have low production costs and almost, zero distribution costs”



PIRA (n.d.). Workflow: The key to streamlining the production printing process, published by Pira International Ltd, accessed on Jan 15, 2015 http://digital1234.konicaminolta.pt/fileadmin/content/EU/opportunities/workflow/Whitepaper_WORKFLOW.pdf pp14
Image source: <http://www.idealliance.org/products/integrated-media-workflow-fundamentals>

Industry Trends

The 2010 NAPL (now Epicomm) Capital Investment Study:

Capital Investment Priorities

Most frequent cited priorities	Next 3 years	Next 5 years
1. Digital infrastructure, workstations, servers, etc.	55.1%	↑ 71.2%
4. Digital presses; vari	55.1%	↑ 71.2%
5. Mailing capabilities		
6. Workflow solutions	32.6%	↑ 44.4%
...		
10. Lithographic presses: 4 or more color	21.8%	23.8%
17. Lithographic presses: 2 color/B&W	13.2%	7.0%

Source: NAPL Capital Investment Study of 2010

<https://epicomm.org/tag/capital-investment/>

Industry Trends

Must-Do's: Top Responses

What actions will be most important to your company's success over the next 2-3 years? What must you do?

Response	Citing
Be as lean as possible. Do more with less. Streamline workflow, reduce steps, touches.	80.0%
Market more effectively.	73.8%
Upgrade our capabilities in key areas.	69.7%
Increase our value to clients by understanding their business better and offering the services they value most.	69.0%
Strengthen our sales team through training, hiring, and, if necessary, firing.	39.3%
Learn to sell non-traditional services (services other than print/copy) more effectively.	37.9%

Epicomm (2014) State of the Industry Report, 12th Edition webinar November 18, 2014

Skills & Training

- Industry members, vendors, consultancies, and other third parties voice the need for skills and training focused on new tools/approaches...



Image source: <http://cdn2.business2community.com/wp-content/uploads/2014/07/Skills.jpg>

Skills and Training

- success in Automation and Integration can require skill sets in:
 - information technology
 - business processes
 - software knowledge
 - database literacy
 - logical programming...



Image source: <http://onlinecareertips.com/2013/05/information-technology-and-its-impact-on-the-logistics-industry/>

Curricular Framework for Workflow Automation

- a combination of theory-based concepts and hands-on, project-based, learning
- process jobs manually
- progress through advanced degrees of workflow automation...

Curricular Framework for Workflow Automation

- based on constructivism theory - a student centred learning strategy focused on assimilation and accommodation...



Image source: <http://www.nwlink.com/~donclark/hrd/learning/transfer.html>

XINET WEBNATIVE PORTAL

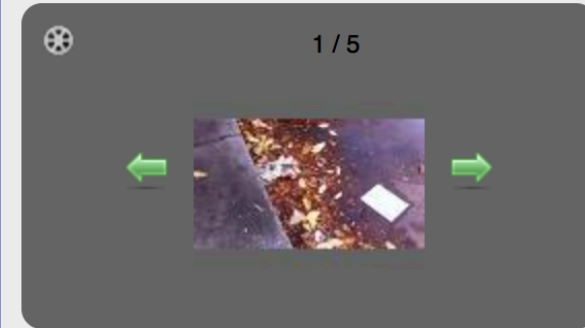
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- ▼ Downtown East End (4)
- ▼ Entertainment/Culture (4)
 - ▼ Art (2)
 - DistilleyArtGalleries...
 - ImageArts.MOV
 - ▶ Movies
 - ▶ Music
 - ▶ Theatre
- ▶ Food (3)
- ▶ Recreation (3)
- ▶ Shopping (3)
- ▶ Downtown West End (4)
- ▶ Etobicoke (4)
- ▶ North York (4)
- test.flv



DistilleyArtGalleries...



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Indoors or Outdoors	Indoor ▾
Location	Downtown East End ▾
Price	Varies ▾
Accessible	☒ Yes ☐ No
19+	☐ Yes ☒ No
Senior Friendly	☒ Yes ☐ No
Teen Friendly	☒ Yes ☐ No
Free Wifi	☒ Yes ☐ No
Original Content	☐



ImageArts.MOV



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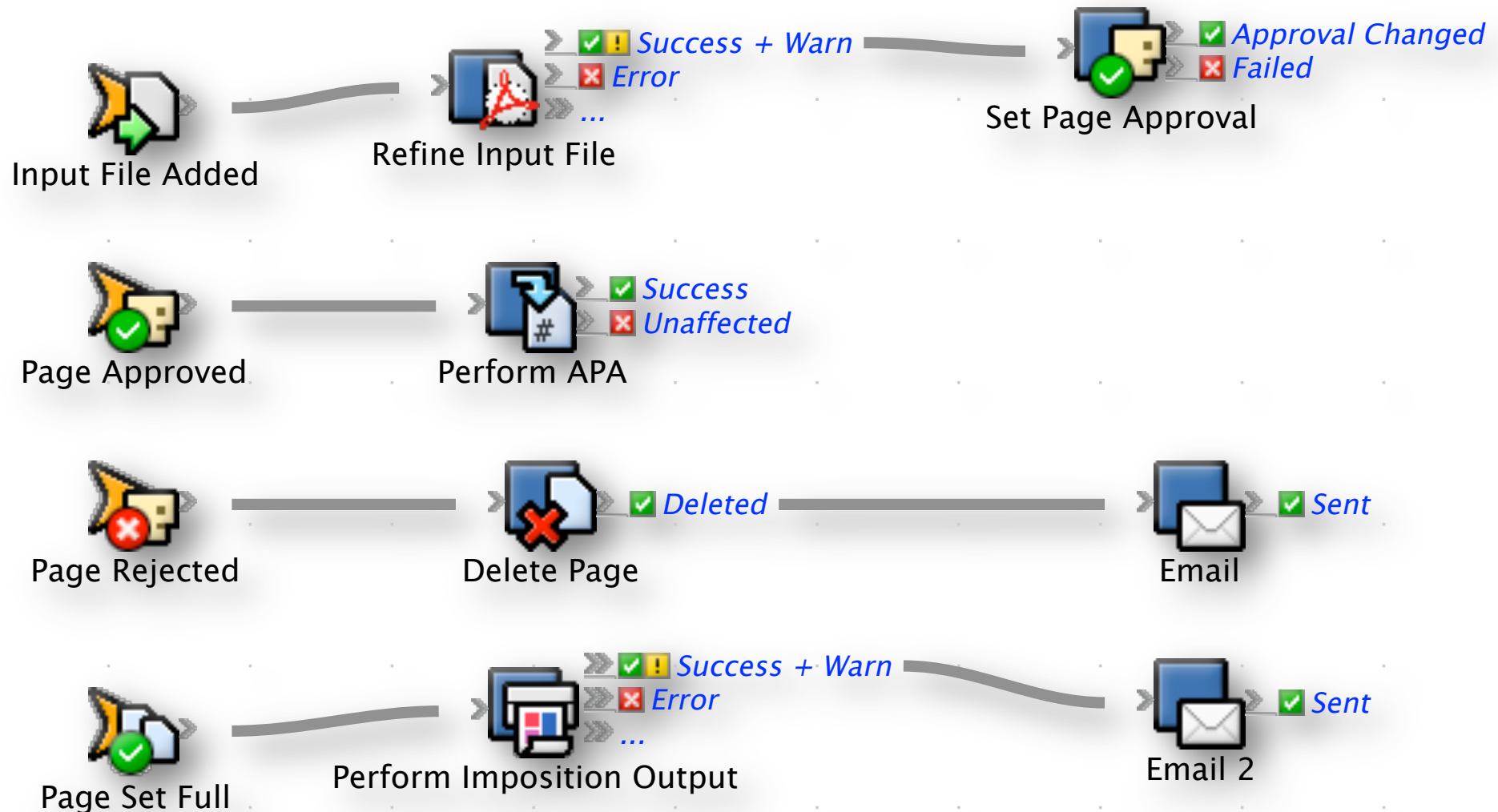
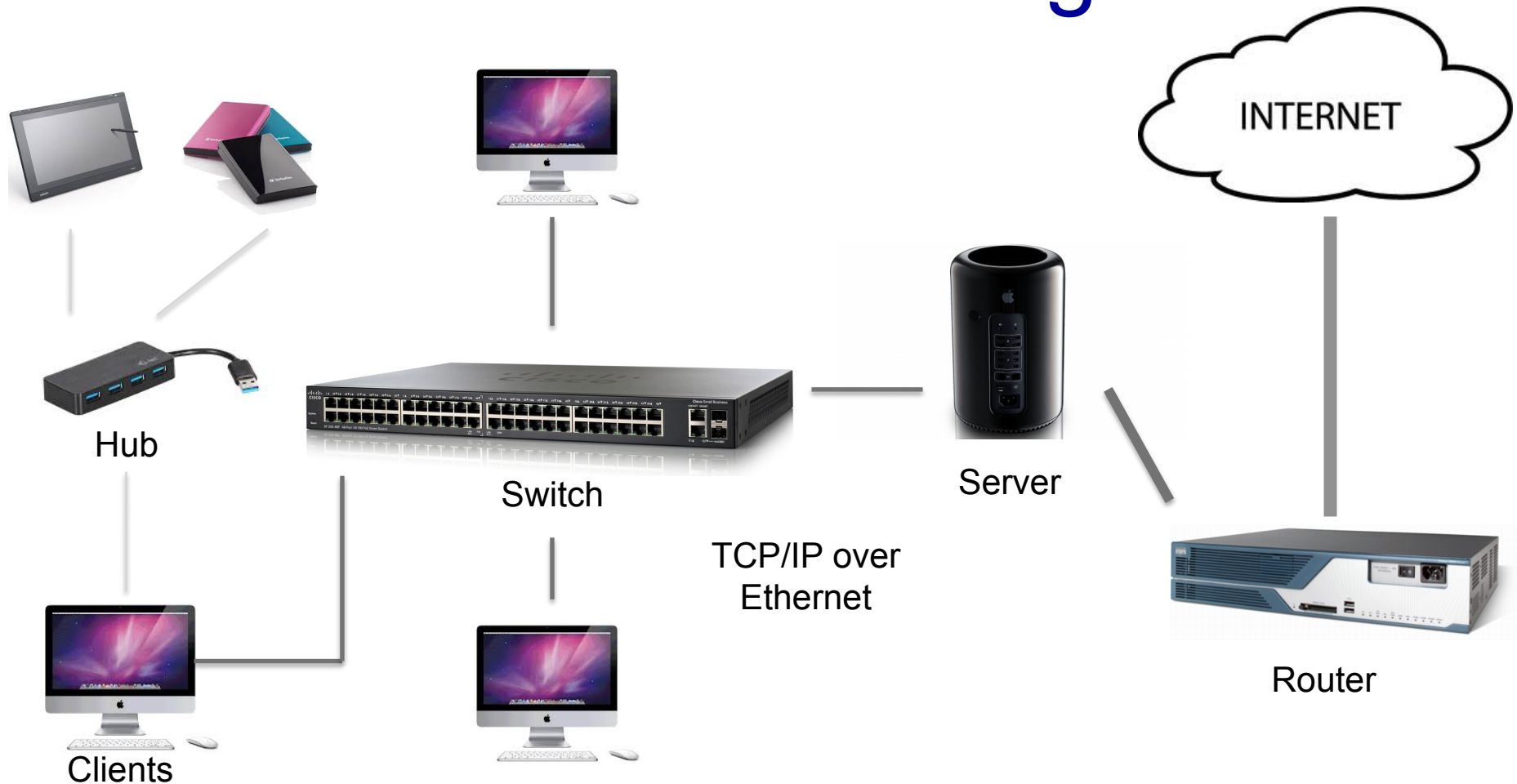


Image source: Kodak Prinergy RBA interface - GRA843 2014 Student Project



Practical Challenges



Images sourced from <https://www.apple.com/pr/products/>
<http://www.cisco.com/web/about/ac50/ac47/2.html>

Practical Challenges

Field name

A field includes the entire column

A record is an entire row

D1	▼	fx Jazz				
	A	B	C	D	E	F
1	Month	Classical	Rock	Jazz	Folk	Total Sales
2	Jan	900	1025	1000	500	2525
3	Feb	700	950	850	450	2250
4	Mar	950	1100	1000	400	2500
5						
6	TOTALS	2550	3075	2850	1350	7275

Image source <http://www.uwec.edu/help/excel03/databas.htm>

Practical Challenges



Video source IFTTT <http://i.imgur.com/lqWIXXE.gif>

Practical Challenges

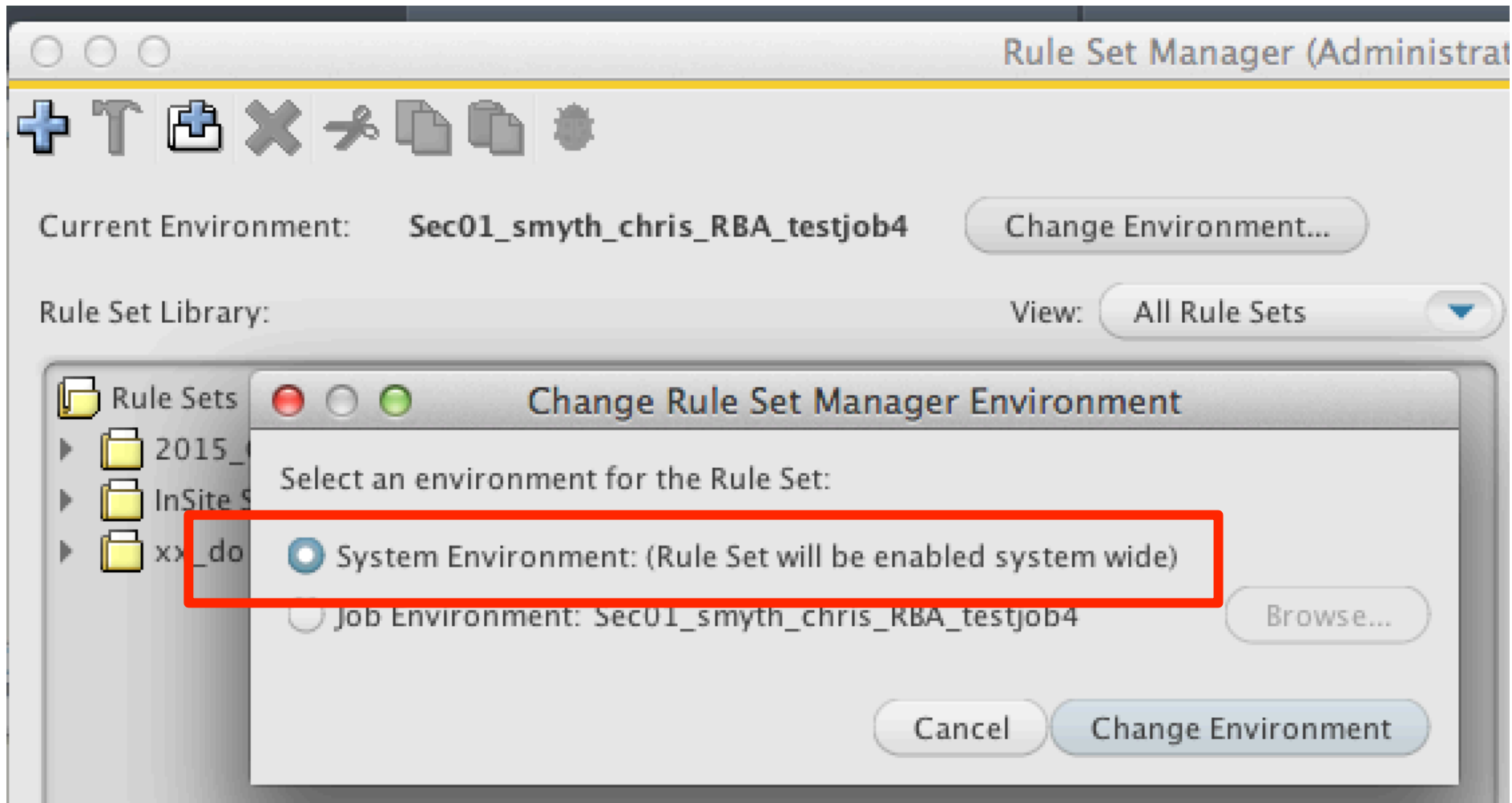


Image source: Kodak Prinergy v5 Rule Builder

The Future of Workflow Automation at GCM

YEAR 1 (Starting 2015/2016)		YEAR 2 (Starting 2016/2017)		YEAR 3 (Starting 2017/2018)			YEAR 4 (Starting 2018/2019)	
GCM 110 Introduction to Graphic Communications (Lec 3 hrs)	GCM 111 Graphic Communication Technologies (Lec 3 hrs)	GCM 230 Typography (Lec 1.5, Lab 1.5 hrs)	GCM 210 Consumer Packaging (Lec 3 hrs)	GCM 350 Estimating and Selling for Graphic Comm (Lec. 1, Lab 2 hrs)	GCM 320 Digital and Variable Data Printing (Lec 1.5, Lab 1.5 hrs)	WKT 608 Internship ¹ (Work Placement/Online)	GCM 420 Advanced Print Production Processes (Lab 3 hrs)	GCM 470 Business Plan ¹ OR GCM 490 Thesis ¹ (Lec. 3 hrs)
GCM 120 Graphic Communications Processes 1 (Lab. 3 hrs)	GCM 121 Graphic Communications Processes 2 (Lab. 3 hrs)	GCM 240 Material Science for Print ¹ (Lec. 1, Lab 2 hrs)	GCM 220 Graphic Communications Processes 3 (Lab. 3 hrs)	GCM 360 Colour Mgmt for Graphic Communications (Lec 1.5, Lab 1.5 hrs)	GCM 362 Web and Cross-media (Lab. 3 hrs)		GCM 460 Asset Mgmt for Graphic Communications (Lec 1.5, Lab 1.5 hrs)	GCM 461 Workflow Automation (Lab 3 hrs)
GCM 130 Design and Layout (Lec 1.5, Lab 1.5 hrs)	CMN 279 Intro to Professional Communications (Lec 3 hrs)	GCM 250 Binding and Finishing (Lec. 1.5, Lab 1.5 hrs)	GCM 260 Digital Premedia Workflow (Lec 1.5, Lab 1.5 hrs)	GCM 370 Management Studies ¹ (Lec. 3 hrs)	GCM 372 Operations and Process Management ¹ (Lec. 3 hrs)		Core Elective 3 of 4	Core Elective 4 of 4
MKT 100 Principles of Marketing (Lec 3 hrs)	GMS 200 Intro to Global Management (Lec 3 hrs)	MKT 300 Marketing Metrics and Analysis (Lec 3 hrs)	ACC 100 Introductory Financial Accounting (Lec 3 hrs)	GCM 375 Project Mgmt for Graphic Communications (Lec. 3 hrs)	Core Elective 2 of 4		Open Elective ² 4 of 5	Open Elective ² 5 of 5
Liberal Studies Table A	SSH 105 Critical Thinking I (Lec 3 hrs)	Liberal Studies Table A	Liberal Studies Table A	Core Elective 1 of 4	Open Elective ² 3 of 5		Liberal Studies Table B	Liberal Studies Table B
	Open Elective ² 1 of 5		Open Elective ² 2 of 5	Liberal Studies Table B				

GCM_Proposed_Curriculum_R7.docx
October 14, 2014

Future?

- workflow automation concentration?
- networking and educational opportunities
 - Xplor (xplor.org) Student Chapter
 - Focus on Integration/Automation?
 - Automation Solutions Network?
 - Printing Industries of America
 - further certifications, such as Idealliance's Integrated Media Workflow Training (idealliance.org/imw-del)

Thank you!

Questions?



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