Pyramid Analysis for DUC2007

- Coordination: Hoa Trang Dang, Lucy Vanderwende
- Pyramid Creation
  - CELCT, IIIT-H, LCC, MSR-Asia*, MSR-Redmond, NUS, OGI, UOttawa
- Pyramid Annotation
  - Tadahi Nomoto, Columbia, EML-Research, IDA, IIIT-H, CELCT, LCC, MSR-Asia*, MSR-India*, MSR-Redmond, NUS, OGI, Peking University, UMontreal, UOttawa, UWaterloo*

*sites that participated in creation/annotation but did submit a system in the main task

Pyramid Analysis for DUC2007

- Coordination of both: Hoa Trang Dang, Lucy Vanderwende
- Pyramid Creation
  - Cameron Fordyce, Prasad Pingali, Rahul K, Andy Hickl, Finley Lacatusu, Like Liu, Yuanjie Liu, and Li Shi, CY Lin, Ben Gelbart (BHG), Lin Ziheng, Qui Long, Seeger Fisher, Margaret Mitchell, Stan Szpakowicz, Anna Kazantseva, Alistair Kennedy, Darren Kipp
- Pyramid Annotation
  - Tadahi Nomoto, Barry Schiffman, Sergey Sigelman, Michael Strube, Katja Filippova, Vivi Nastase, John Conroy, Prasad Pingali, Rahul K, Cameron Fordyce, Andy Hickl, Finley Lacatusu, Like Liu, Yuanjie Liu, and Li Shi, CY Lin, Jagadeesh Jagarlamudi, A. Kumaran, Ben Gelbart (BHG), Lin Ziheng, Qui Long, Seeger Fisher, Margaret Mitchell, Sujian (plus others), Guy Lapalme, Fabrizio Gotti, Alistair Kennedy, Darren Kipp, Anna Kazantseva, Terry Copeck, Maheedhar Kolla

2007 Pyramid Creation

- 8 groups created and checked 23 pyramids (each 2-3 pyramids, approx 4-6 hours per pyramid)
  - For each cluster:
    first site created the pyramid
    second site commented on the pyramid
    first site made revisions and sent pyramid to Hoa
- Different from previous years:
  - Only one pyramid was created per cluster and commented on vs. two separate pyramids needing to be reconciled
  - No final vetting vs. final vetting provided by Columbia

2007 Pyramid Annotation

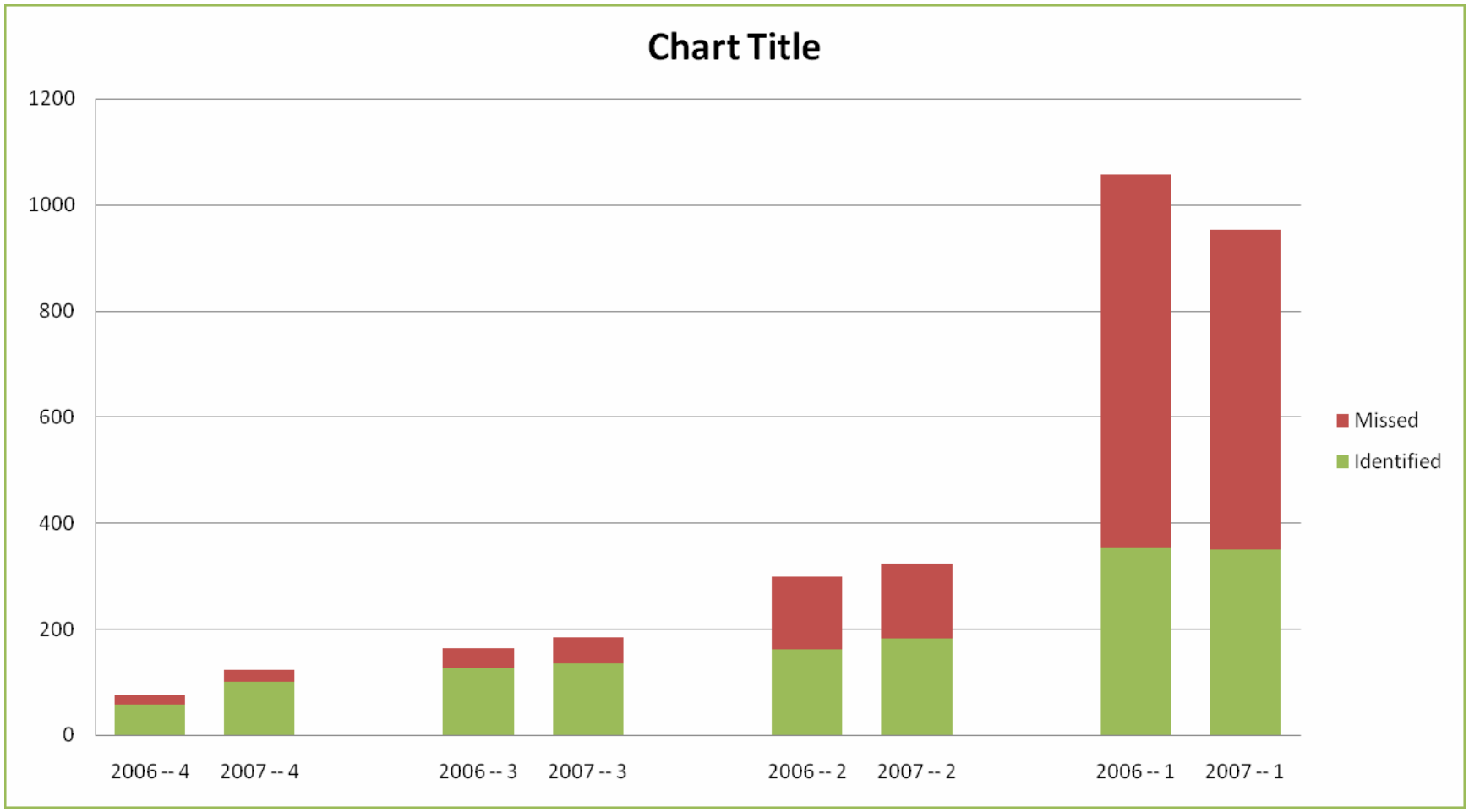
- 15 groups annotated peer summaries (each 1-2 sets, approx 7 hours per set)
  - For each cluster:
    first site annotated 13 peer summaries (2 baselines and 11 system summaries)
    second site commented on the annotations
    first site made revisions and sent annotations to Hoa
- Different from previous years:
  - Only one annotation for peer summaries and commented on vs. two annotations needing to be reconciled*
  - No final vetting vs. final vetting provided by Columbia

*as in previous years, no changes to the original pyramid were allowed once annotation begins; several sites would like to add the ability to make comments as they annotate

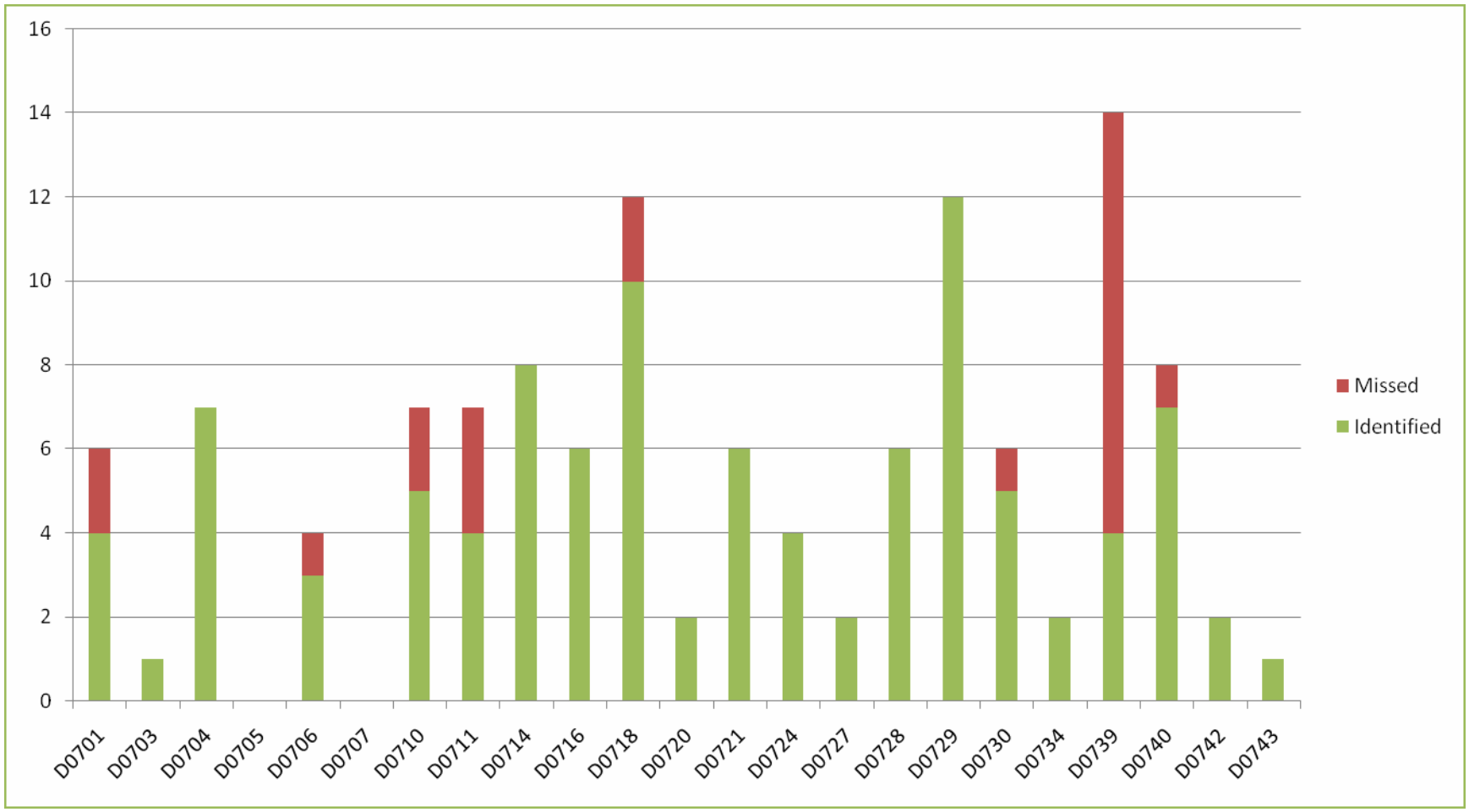
Why continue?

- This is a community-based effort, and the effort the community put in demonstrates that there is considerable interest in the pyramid method of analysis.
  - we now have pyramids for approx. 75 clusters (more if you also count the clusters in MSE)
- The results of the pyramid analysis and some further analysis were presented this morning in Hoa's overview talk
- Pyramids provide diagnostics to understand what's present and more importantly, what's missing in system summaries.
  - Data for the next few slides can be made available (like Lapalme's spreadsheet) if others are also interested; further suggestions are welcome (e.g. average # of SCUs identified by systems)
  - The following data and charts were created by Jagadeesh Jagarlamudi – thanks Jags!

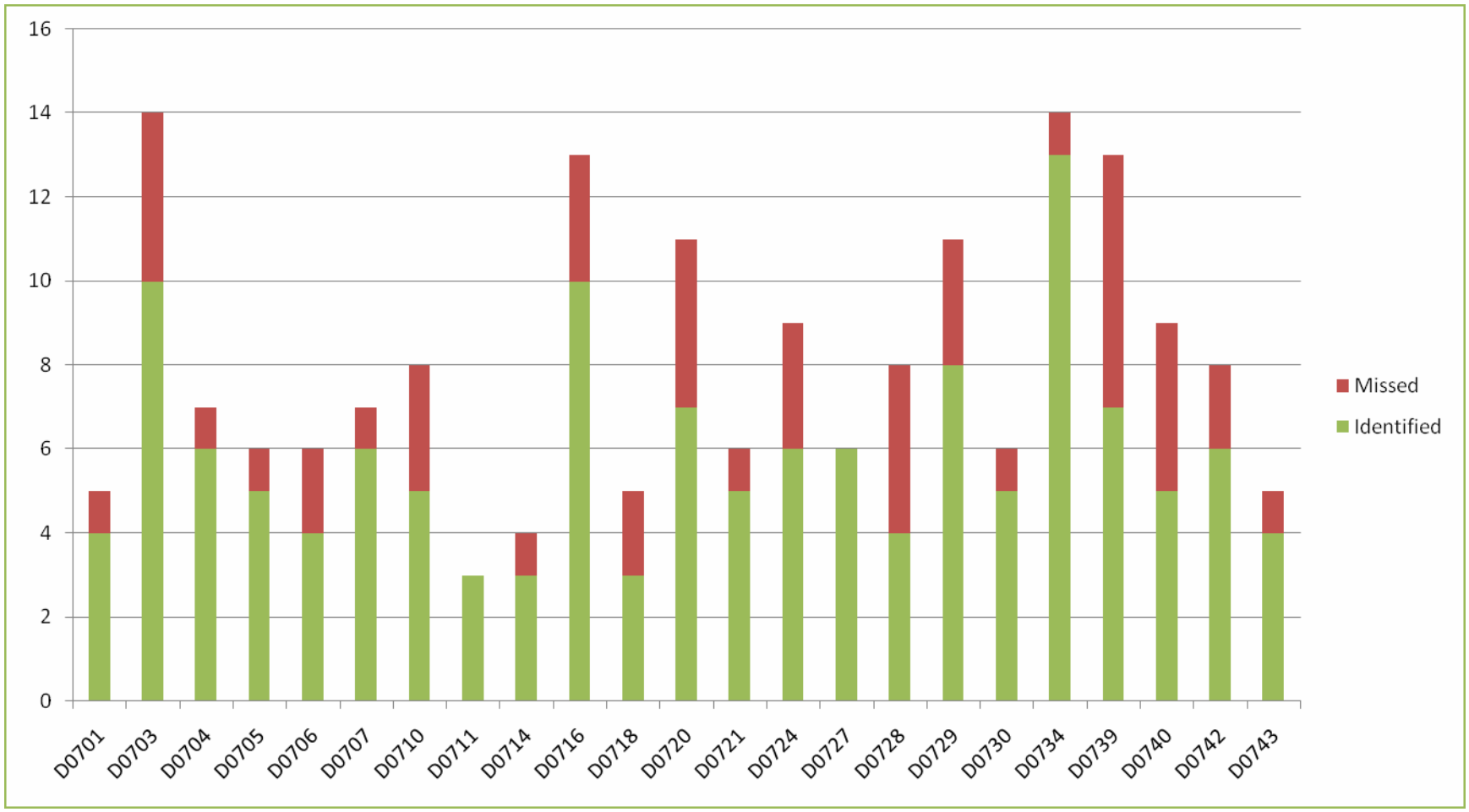
SCU's in 2006 vs. 2007



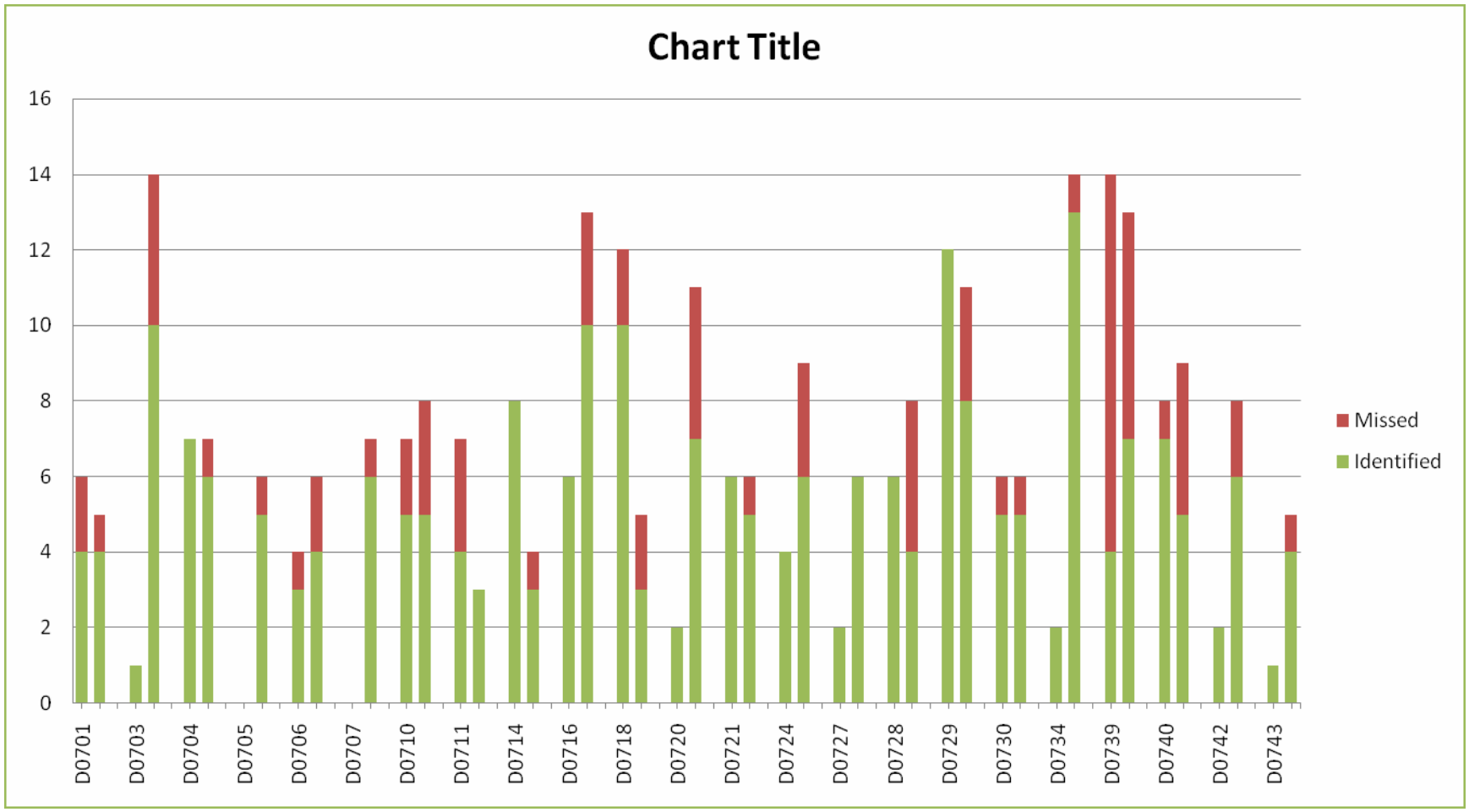
Distribution of SCUs (score 4)



Distribution of SCUs (score 3)



Distribution of SCUs (4 & 3)



Correlation between 4-scoring SCUs & ROUGE-2

Cluster (Sorted based on # of 4 SCUs)	ROUGE-2
D0739	0.07722265
D0718	0.09275871
D0729	0.09537576
D0714	0.10423394
D0740	0.09643379
D0704	0.07820909
D0710	0.11747636
D0711	0.09910076
D0701	0.10038394
D0716	0.13642992
D0721	0.10365008
D0728	0.08133568
D0730	0.13932538
D0706	0.0872997
D0724	0.06270258
D0720	0.12433742
D0727	0.09194538
D0734	0.08470894
D0742	0.12981674
D0703	0.11153697
D0743	0.05748174
D0705	0.10409409

Correlation between 4,3-scoring SCUs & ROUGE-2

4&3 identified	ROUGE-2	cluster
20	0.09537576	D0729
16	0.13642992	D0716
15	0.08470894	D0734
13	0.09275871	D0718
13	0.07820909	D0704
12	0.09643379	D0740
11	0.07722265	D0739
11	0.11153697	D0703
11	0.10423394	D0714
11	0.10365008	D0721
10	0.11747636	D0710
10	0.08133568	D0728
10	0.06270258	D0724
10	0.13932538	D0730
9	0.12433742	D0720
8	0.10038394	D0701
8	0.12981674	D0742
8	0.09194538	D0727
7	0.09910076	D0711
7	0.0872997	D0706
6	0.11732227	D0707
5	0.05748174	D0743

Correlation between 4,3-scoring SCUs & ROUGE-2

4 & 3 (Ident)	ROUGE-2	Column1	4 & 3 (Total)	Fraction
20	0.09537576		23	0.869565
16	0.13642992		19	0.842105
15	0.08470894		16	0.9375
13	0.09275871		17	0.764706
13	0.07820909		14	0.928571
12	0.09643379		17	0.705882
11	0.07722265		27	0.407407
11	0.11153697		15	0.733333
11	0.10423394		12	0.916667
11	0.10365008		12	0.916667
10	0.11747636		15	0.666667
10	0.08133568		14	0.714286
10	0.06270258		13	0.769231
10	0.13932538		12	0.833333
9	0.12433742		13	0.692308
8	0.10038394		11	0.727273
8	0.12981674		10	0.8
8	0.09194538		8	1
7	0.09910076		10	0.7
7	0.0872997		10	0.7
6	0.11732227		7	0.857143
5	0.05748174		6	0.833333