

## Description of field data sets used in Bolton, Greiner, and Ockenfels: “Engineering Trust – Reciprocity in the Production of Reputation Information”

### *Summary*

Datasets 1 to 3 contain data from eBay. *Dataset 1* holds data on one month of transactions on eBay (from six categories in seven countries) and follows their feedback in the old conventional feedback (CF) system. The data also contains individual feedback data from just before and after the change. *Dataset 2* mirrors *Dataset 1* for the young Feedback 2.0 feedback system (DSR), about 8 months later. *Dataset 3* was compiled separately to compare eBay markets with the traditional CF system (like Germany and the U.S.) to existing eBay markets with special institutional variations: the blind MercadoLivre reputation system, and the system used in eBay China, employing different feedback rules for ‘verified’ and ‘unverified’ buyers.

Datasets 4 and 5 are compiled from other sources. In *Dataset 4* we collected all feedback data left until 2007 on RentACoder.com. *Dataset 5* is a snapshot of feedback data on Amazon.de. In the following we provide detailed information on source, retrieval method, and content of our data sets.

### *Dataset 1 – eBay transactions in Nov/Dec 2006 and corresponding feedback until March 2007*

We constructed a sample involving about one million postings on eBay in November and December 2006. The eBay sites included in our sample were ebay.benl.be, ebay.co.uk, ebay.com.au, ebay.fr, and ebay.pl, where the feedback redesign was introduced in beginning of March 2007, as well as ebay.com and ebay.de, with a starting date of the new system in early May 2007. We decided for 6 different categories, which represent products traded on eBay with different levels of heterogeneity, prices and average feedback: original printer cartridges (CART), new cell phones without service contract (CELL), fragrances (FRAG), antiques (ANTIQUES), paper money (MONEY) and amazon.(com|de|co.uk) gift certificates (AMAZ). To obtain transaction ids we conducted searches for all available completed eBay listings in these categories and countries at a specific date (for categories AMAZ, CELL, CART, MONEY in countries co.uk, com, com.au, de, fr, pl on 12/13/2006, for categories ANTIQUES and FRAG and country be on 12/23/2006). Then we downloaded the auction main pages for all these item ids from the respective country’s eBay website, and the bid/purchase history pages from eBay.com, where appropriate. Auction and bid pages were parsed for all available information. In the second half of May 2007 we downloaded the feedback profiles for all sellers and successful buyers at least back to the date of the first eBay listing in our sample they were involved in. If feedback profiles were invalid or set to private, we additionally downloaded the feedback *giving* profiles of their transaction partners. From the feedback data, we extracted the feedback aggregates (feedback score, %pos, number of feedbacks received, detailed seller ratings if existent, etc.) at the time of download as well as all individual feedbacks (feedback, time, item id, partner, comment, etc.) received/given between the end of listing and the feedback download. Using feedback profiles at download time and individual feedbacks received since listing end time, we reconstructed the feedback score and the percentage of positive feedbacks of seller and buyer(s) of each item at the listing end time. Furthermore, for each successful eBay

transaction in our sample, we searched for the feedback value and times given by the transaction partners to each other. Altogether we were able to identify detailed feedback behavior for more than 99.8% of successful transactions in our sample. Table 8 provides descriptive statistics of our dataset.

DESCRIPTIVES OF DATASET 1

	N	Feedback and timing					Buyer's feedback					Seller's feedback			
		No FB	Only B	Only S	B first	S first	+	0	-	B wd	mut wd	+	0	-	mut wd
All	722,929	23.5	6.5	6.5	44.2	19.4	97.1	1.0	1.4	0.3	0.2	97.9	0.2	1.6	0.2
Country															
Belgium	12,293	19.0	4.9	6.9	43.9	25.3	96.9	0.9	1.6	0.4	0.2	97.5	0.4	1.9	0.2
U.K.	143,794	22.4	6.2	6.4	43.2	21.8	97.5	0.8	1.3	0.2	0.2	97.4	0.2	2.2	0.2
U.S.	302,140	27.9	6.6	7.0	43.5	15.0	96.6	1.2	1.5	0.4	0.3	97.8	0.2	1.7	0.3
Australia	31,978	24.1	4.6	5.6	46.7	18.9	97.4	0.9	1.2	0.3	0.2	97.9	0.2	1.7	0.2
Germany	192,502	17.3	6.9	6.0	45.9	23.9	97.5	0.9	1.2	0.3	0.1	98.7	0.2	0.9	0.1
France	39,088	23.5	6.4	6.0	43.3	20.8	95.9	1.4	2.0	0.4	0.3	96.5	0.5	2.7	0.3
Poland	1,134	48.9	5.6	5.2	25.2	15.2	96.9	0.4	2.1	0.6	0.0	97.5	0.0	2.5	0.0
Category															
Amaz	842	12.8	10.0	9.4	38.2	29.6	99.1	0.0	0.3	0.6	0.0	98.9	0.0	1.1	0.0
Antiques	47,052	19.9	5.6	7.0	45.7	21.8	98.3	0.7	0.7	0.2	0.1	98.8	0.2	0.9	0.1
Cart	16,450	11.5	6.0	6.3	45.4	30.8	98.8	0.5	0.6	0.1	0.0	99.6	0.1	0.3	0.0
Cell	363,735	29.5	6.6	7.5	38.4	17.8	95.4	1.5	2.2	0.6	0.3	96.7	0.3	2.7	0.3
Frag	270,798	17.9	6.6	4.9	51.8	18.7	98.3	0.7	0.8	0.2	0.1	98.9	0.2	0.8	0.1
Money	24,052	10.6	4.4	7.0	41.5	36.5	99.5	0.1	0.2	0.2	0.0	99.7	0.0	0.2	0.0

Notes: All shares in %. “No FB” stands for no feedback, “Only B/S” for feedback given only by buyer/seller, “B/S first” for feedback given by both, but buyer/seller first, +/0/- for positive/neutral/negative feedback, respectively. ‘B wd’ denotes buyer feedback withdrawn by eBay, and ‘mut wd’ means feedback mutually withdrawn by transaction partners.

*Individual eBay feedbacks until May 2007.* In order to create *Dataset 1* we downloaded the feedback profiles of the about 1 million involved eBay members back to the page of their feedback profile covering the time of the first listing in our sample they were involved in. Profiles were downloaded in pages with 200 individual feedbacks each. All these feedback profiles were parsed for individual feedbacks, not necessarily directly connected to the transactions in *Dataset 1*. The same was done for the obtained feedback giving profiles. Over all included countries, this procedure resulted in 78,045,630 individual feedbacks before the introduction of Feedback 2.0 in March/May 2007, and about 7,060,819 individual feedbacks thereafter until May 2007, which allow us to track short-term changes in CF feedback and early DSR feedback scores.

*Dataset 2 – eBay transactions between June 1<sup>st</sup> and June 14<sup>th</sup> 2007 and corresponding feedback under Feedback 2.0 until September 2007*

This dataset was assembled in conjunction with eBay, and mirrors *Dataset 1* for the post-Feedback 2.0 period. For the same categories and countries as in *Dataset 1*, the data set includes transaction

and feedback information for successful transactions which have taken place in the two weeks between 06/01/2007 until 06/14/2007. (The only category mistakenly not included was “printer cartridges” in France.) Some categories were defined somewhat broader (for example, “gift certificates” instead of “amazon gift certificates”). Altogether, the set includes data from completed 573,567 transactions and 963,925 individual feedbacks. All eBay user names were anonymized in the data, which also did not include any personal information. Besides the transaction and feedback details the data set includes the individual detailed seller ratings given by buyers, which would not be available in a downloaded dataset. In order to protect eBay’s commercial interests, we are not able to report this data in such detail as for the downloaded *Dataset 1*.

*Dataset 3 – Feedback data from Mercado Livre, eBay China, and other eBay sites from June 2006*

Between June 12<sup>th</sup> and June 26<sup>th</sup> 2006 we elicited all offers in categories Antiques/Art, Cell phones, and Health&Beauty from eBay’s platforms in the U.S., Germany, and China, as well as from the eBay-owned platform in Brazil, which is called Mercado Livre and active throughout South America. Of these listings, we selected random samples of 2%, 6%, and 20% for U.S., Germany, and China, respectively, and included all listings in Brazil. From these we excluded observations involving eBay members with “private” eBay profiles, for which feedback data could not be elicited. This procedure left us with 28,435 completed transactions. Table 9 shows a summary of observations.

DESCRIPTIVES OF DATASET 3

Number of observations				
	Transactions	Buyer gives FB	Seller gives FB	Both give FB
US	10,169	7,602	7,799	6,941
Germany	14,297	11,052	10,990	10,070
China	2,011	188	178	125
B unverified	949	29	34	15
B verified	1,062	159	144	110
Brazil	1,958	1,394	1,721	1,276
Buyer gives feedback ...				
	Positive	Neutral	negative	withdrawn
US	7,492	42	48	20
Germany	10,847	73	91	41
China	151	1	5	2
B unverified				
B verified	151	1	5	2
Brazil	1,134	172	88	
Seller gives feedback ...				
	Positive	Neutral	negative	withdrawn
US	7,704	14	74	7
Germany	10,872	20	83	15
China	166	2	10	0
B unverified	29	0	5	0
B verified	137	2	5	0
Brazil	1,218	214	289	

*Dataset 4 – Feedback data from RentACoder.com*

On RentACoder.com, buyers and sellers (coders) can give feedback on a 10-point scale, along with verbal comments. In March 2007, we downloaded feedback data from all 192,392 transactions which took place between January 2004 and January 2007. In addition to feedback submitted by transaction partners, an arbitrator from RentACoder.com gives comments in cases where projects were not completed. We ignored those observations in our dataset.

*Dataset 5 – Feedback data from Amazon.de and survey with Amazon sellers*

In May 2007 we downloaded feedback data of 10,474 Amazon.de marketplace sellers from the Amazon.de website. Amazon’s application programming interface (API) allows to request only up to 50 recent feedbacks per seller. We started with all sellers who offered the German version of the then popular book “Vanish” by Tess Gerritsen. The book was chosen as it was on Amazon’s bestseller list and was offered by many different sellers. From these sellers we downloaded details of the 50 last feedbacks, including the item ids of the products they have sold. For each of these item ids, we downloaded the 50 recent feedbacks of all sellers who currently offered this product on Amazon.com. We repeated this process until the number of captured Amazon sellers hit the threshold of 10,000. Our resulting data set consists of 320,609 feedbacks given by buyers to sellers.

Note that the API’s restriction of 50 feedbacks per seller results in an overweighting of feedback from smaller sellers in our data set compared to the total amount of individual feedbacks on Amazon, but yields a representative picture of the performance of the average seller in recent transactions. To obtain some data on feedback frequencies and feedback system perceptions, in June 2007 we contacted a random sample of 590 Amazon sellers in our data set using the Amazon contact form, and asked them to answer three questions on frequency of buyer feedback, satisfaction with buyer feedback, and desirability of a two-sided system. 91 of the contacted sellers responded to our survey, with an average of 778 received feedbacks on Amazon (ranging from 1 to 10,699).