## **Graph2** Event type and corresponding role

| id  | Class       | Туре                   | role | role              | role             | role            | role     | role    |
|-----|-------------|------------------------|------|-------------------|------------------|-----------------|----------|---------|
| 1   | Finance /   | Sale /                 | time | Seller            | Transaction      | Price           | Acquire  | Tote    |
| 1   | Trading     |                        | time | Seller            | object           | FIICE           | -        |         |
|     | Finance /   | acquisition Limit down | 4:   | down-limit-hit    | Object           |                 | r        |         |
| 2   |             |                        | time |                   |                  |                 |          |         |
| 2   | Trading     | Hitting                | ,-   | stock             | D                |                 |          |         |
| 3   | Finance /   | raise interest         | time | Interest rate     | Decision-        |                 |          |         |
|     | Trading     | rates                  |      | increase          | making agency    |                 |          |         |
| 4   | Finance /   | price reduction        | time | Price reduction   | price reduction  | degree of       |          |         |
|     | Trading     |                        |      | subject           | object           | decrease        |          |         |
| 5   | Finance /   | Cut interest           | time | Interest rate cut | Decision-        |                 |          |         |
|     | Trading     | rates                  |      |                   | making agency    |                 |          |         |
| 6   | Finance /   | Financing              | time | Following         | Lead investor    | Financing round | Financin | Financi |
|     | Trading     |                        |      | investor          |                  |                 | g        | er      |
|     |             |                        |      |                   |                  |                 | Amount   |         |
| 7   | Finance /   | Go public              | time | location          | company to be    | Financing       |          |         |
|     | Trading     |                        |      |                   | listed           | Amount          |          |         |
| 8   | Finance /   | Price increase         | time | magnitude of      | Price increase   | Price increase  |          |         |
|     | Trading     |                        |      | price increase    | object           | subject         |          |         |
| 9   | Finance /   | Limit Up               | time | up-limit-hit      |                  |                 |          |         |
|     | Trading     | Hitting                |      | stock             |                  |                 |          |         |
| 10  | Product     | Product                | time | Products          | Publisher        |                 |          |         |
|     | behavior    | Publish                |      |                   |                  |                 |          |         |
| 11  | Product     | Award                  | time | Winner            | Awards           | Awarding        |          |         |
|     | behavior    | 11 31- 32              |      | .,,               | 2 2.1. 4.2 4.2   | agency          |          |         |
| 12  | Product     | Film/Movie             | time | Film company      | The movie/film   |                 |          |         |
| 12  | behavior    | Released               |      | Timi company      |                  |                 |          |         |
| 13  | Product     | Take product           | time | Products          | Product owner    | Subject of      |          |         |
|     | behavior    | off shelves            |      | Troducts          | 1 Todaet owner   | Taking off      |          |         |
| 14  | Product     | Recall                 | time | Products          | Recalling        | Taking on       |          |         |
| 14  | behavior    | Recail                 | time | Froducts          |                  |                 |          |         |
| 1.5 |             | A1i                    | 4:   | Tl                | agency           |                 |          |         |
| 15  | Socialize   | Apologize              | time | The agency        | Apologizer       |                 |          |         |
|     |             |                        |      | being             |                  |                 |          |         |
| 1.0 | G : 1:      | 111                    |      | appologized       | mi ·             |                 |          |         |
| 16  | Socialize   | like                   | time | The agency who    | The agency who   |                 |          |         |
|     |             |                        |      | clicked "Like"    | is "Liked"       |                 |          |         |
| 17  | Socialize   | Thanks                 | time | The agency who    | The agency who   |                 |          |         |
|     |             |                        |      | Thanks            | is being         |                 |          |         |
|     |             |                        |      |                   | Thanked          |                 |          |         |
| 18  | Socialize   | Meet                   | time | location          | The agency who   | meeting guest   |          |         |
|     |             |                        |      |                   | host the meeting |                 |          |         |
| 19  | Socialize   | Visit                  | time | Visitor           | Visit object     |                 |          |         |
| 20  | Competition | Win the                | time | Champion          | Match/Competiti  |                 |          |         |
|     | behavior    | championship           |      |                   | on Name          |                 |          |         |
| 21  | Competition | Advance to the         | time | Promotion party   | Match/Competiti  | <del></del>     |          | 1       |

|    | behavior             | next round         |        |                  | on Name                  |                 |          |        |
|----|----------------------|--------------------|--------|------------------|--------------------------|-----------------|----------|--------|
| 22 | Competition          | Suspension         | time   | Suspended        | Suspended                | Suspended       |          |        |
| 22 | behavior             | (from a game)      | tillic | duration         | person                   | institutions    |          |        |
| 23 | Competition          | Win or lose        | time   | Loser            | Winner                   | Match/Competiti |          |        |
| 23 | behavior             | will of lose       | tillie | Losei            | Williei                  | on Name         |          |        |
| 24 | Competition          | Abandone a         | time   | Match/Competiti  | The agency who           | On Name         |          |        |
| 24 | behavior             |                    | time   | on Name          | The agency who withdraws |                 |          |        |
|    | Dellavioi            | game<br>(Withdraw) |        | on Name          | withdraws                |                 |          |        |
| 25 | Commotition          |                    | 4:     | The Retired      |                          |                 |          |        |
| 25 | Competition behavior | Retire             | time   | The Retired      |                          |                 |          |        |
| 26 |                      | Circo himth        | 4:     | Childhaanan      | Nome of the              |                 |          |        |
| 26 | life                 | Give birth         | time   | Childbearer      | Name of the              |                 |          |        |
| 27 | 1.0                  | 11 00 :            | ,.     | T1 1 1           | baby                     |                 |          |        |
| 27 | life                 | Have an affair     | time   | The one who has  | The other                |                 |          |        |
| 20 | 1: 0                 | , ,                | ,.     | an affair        | man/woman                |                 |          |        |
| 28 | life                 | got engaged        | time   | The one who is   |                          |                 |          |        |
| 20 | 1: 0                 | D 1                | ,.     | Engaged          |                          |                 |          |        |
| 29 | life                 | Break up           | time   | The breaking up  |                          |                 |          |        |
| 30 | life                 | Pregnant           | time   | The Pregnant     |                          |                 |          |        |
| 31 | life                 | Wedding            | time   | location         | Participants             | Married couple  |          |        |
| 32 | life                 | Get married        | time   | Married couple   |                          |                 |          |        |
| 33 | life                 | Divorce            | time   | Divorced parties |                          |                 |          |        |
| 34 | life                 | Birthday           | time   | Birthday         | age of Birthday          | guests          |          |        |
|    |                      |                    |        | boy/girl         | boy/girl                 |                 |          |        |
| 35 | life                 | Proposal of        | time   | suitor           | The one being            |                 |          |        |
|    |                      | marriage           |        |                  | proposed                 |                 |          |        |
| 36 | life                 | Lost contact       | time   | location         | Missing person           |                 |          |        |
| 37 | life                 | Death              | time   | location         | Deceased age             | The deceased    |          |        |
| 38 | Judicial act         | Fine               | time   | The one being    | executor                 | penalty         |          |        |
|    |                      |                    |        | fined            |                          |                 |          |        |
| 39 | Judicial act         | Arrest             | time   | Arrester         | The Arrested             |                 |          |        |
| 40 | Judicial act         | Report an          | time   | Reporter         | Informee                 |                 |          |        |
|    |                      | offense            |        |                  |                          |                 |          |        |
| 41 | Judicial act         | Open a court       | time   | Court            | Court case               |                 |          |        |
| 42 | Judicial act         | Case-Filing(for    | time   | Filing agency    | The case                 |                 |          |        |
| L  |                      | investigation)     |        |                  |                          |                 |          |        |
| 43 | Judicial act         | To sue             | time   | Defendant        | Accuser                  |                 |          |        |
| 44 | Judicial act         | Imprisoned         | time   | Prisoner         | Sentence                 |                 |          |        |
| 45 | Judicial act         | Interviewed        | time   | The Interviewed  | hoster                   |                 |          |        |
|    |                      | (by the            |        |                  |                          |                 |          |        |
|    |                      | government)        |        |                  |                          |                 |          |        |
| 46 | Disaster /           | Explosion          | time   | location         | death toll               | Number of       |          |        |
|    | accident             |                    |        |                  |                          | injured         |          |        |
| 47 | Disaster /           | Car accident       | time   | location         | death toll               | Number of       |          |        |
|    | accident             |                    |        |                  |                          | injured         |          |        |
| 48 | Disaster /           | Earthquake         | time   | death toll       | Magnitude                | Focal depth     | Epicente | Number |
|    | accident             | •                  |        |                  | _                        | •               | r        | of     |
|    | <u>I</u>             | <u>I</u>           |        | <u>I</u>         |                          | <u>l</u>        | 1        | 1      |

|    |                          |                |        |                  |                 |                     |          | injured |
|----|--------------------------|----------------|--------|------------------|-----------------|---------------------|----------|---------|
| 49 | Disaster /               | Flood          | time   | location         | death toll      | Number of           |          |         |
|    | accident                 |                |        |                  |                 | injured             |          |         |
| 50 | Disaster /               | Catch fire     | time   | location         | death toll      | Number of           |          |         |
|    | accident                 |                |        |                  |                 | injured             |          |         |
| 51 | Disaster /               | Collapse(road, | time   | Collapsed        | death toll      | Number of           |          |         |
|    | accident                 | building,)     |        | subject          |                 | injured             |          |         |
| 52 | Disaster /               | Attack         | time   | location         | The Attacked    | death toll          | Attacker | Number  |
|    | accident                 |                |        |                  |                 |                     |          | of      |
|    |                          |                |        |                  |                 |                     |          | injured |
| 53 | Disaster /               | Plane crash    | time   | location         | death toll      | Number of           |          |         |
|    | accident                 |                |        |                  |                 | injured             |          |         |
| 54 | Organization             | Layoffs        | time   | The organization | Number of       |                     |          |         |
|    | al                       |                |        |                  | layoffs         |                     |          |         |
|    | relationship             |                |        |                  |                 |                     |          |         |
| 55 | Organization             | Resignation    | time   | Departure        | Original        |                     |          |         |
|    | al                       |                |        |                  | organization    |                     |          |         |
|    | relationship             |                |        |                  |                 |                     |          |         |
| 56 | Organization             | Join(a         | time   | Franchisee       | Affiliated      |                     |          |         |
|    | al                       | Company/Gro    |        |                  | organizations   |                     |          |         |
|    | relationship             | up)            |        |                  |                 |                     |          |         |
| 57 | Organization             | Fire           | time   | Firing party     | Fired person    |                     |          |         |
|    | al                       | -              |        | 81,              |                 |                     |          |         |
|    | relationship             |                |        |                  |                 |                     |          |         |
| 58 | Organization             | Disband        | time   | Dissolution      |                 |                     |          |         |
|    | al                       |                |        | party            |                 |                     |          |         |
|    | relationship             |                |        | purty            |                 |                     |          |         |
| 59 | Organization             | Cancel         | time   | Cancelled party  | Canceler        |                     |          |         |
|    | al                       | Contract       | VIII.  | Cumounou purty   |                 |                     |          |         |
|    | relationship             | Commun         |        |                  |                 |                     |          |         |
| 60 | Organization             | Suspend (from  | time   | Organization     | Suspended staff |                     |          |         |
|    | al                       | a job)         | time   | Organization     | Suspended staff |                     |          |         |
|    | relationship             | u joo)         |        |                  |                 |                     |          |         |
| 61 | Organization             | drop out (from | time   | The one who      | Original        |                     |          |         |
| 01 | al                       | a group)       | tillic | leave            | organization    |                     |          |         |
|    | relationship             | a group)       |        | icave            | organization    |                     |          |         |
| 62 | Organization             | Strike         | time   | Organization     | Strikes         | Striker             |          |         |
| 02 | al behavior              | Stilke         | tille  | O15amzanon       | Suikes          | Suikei              |          |         |
| 63 | Organization             | Closing (an    | time   | location         | Event name      |                     |          |         |
| 03 | al behavior              | event)         | unic   | iocation         | Event name      |                     |          |         |
| 64 |                          |                | tima   | location         | Event name      |                     |          |         |
| 04 | Organization al behavior | Opening (an    | time   | юсаноп           | Елент паше      |                     |          |         |
| 65 |                          | event)         | 4:     | lo antis ::      | Manal-          | Doro do assessita e |          |         |
| 65 | Organization             | parade (to     | time   | location         | March           | Parade number       |          |         |
|    | al behavior              | protest)       |        |                  | organization    |                     |          |         |