```
REGRESSION
```

/MISSING LISTWISE

/STATISTICS COEFF OUTS CI(95) BCOV R ANOVA COLLIN TOL CHANGE ZPP

/CRITERIA=PIN(.05) POUT(.10)

/NOORIGIN

/DEPENDENT CRECEIVE

/METHOD=ENTER APPYEAR BCKGTLAG CLAIMS FWDAPLAG GENERAL GYEAR ORIGINAL SECDLW BD SECDUPBD SELFCTLB

SELFCTUB

/RESIDUALS DURBIN

/CASEWISE PLOT(ZRESID) OUTLIERS(3).

## Regression

| Output Created         | 19-SEP-2018 20:40:56              |  |
|------------------------|-----------------------------------|--|
| Comments               |                                   |  |
| Input                  | Data                              | D: \SOC6100\Assignments\A ssignment01\Results\Resu lts1995to1999\Townes_S OC6100_Assignment01_D ata_Sample.sav |
|                        | Active Dataset                    | DataSet1   |
|                        | Filter                            | <none></none>  |
|                        | Weight                            | <none></none>  |
|                        | Split File                        | <none></none>  |
|                        | N of Rows in Working Data<br>File | 2000   |
| Missing Value Handling | Definition of Missing             | User-defined missing values are treated as missing.  |
|                        | Cases Used                        | Statistics are based on cases with no missing values for any variable used.                                    |

#### Notes

| Syntax    |  | REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS CI(95) BCOV R ANOVA COLLIN TOL CHANGE ZPP /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT CRECEIVE /METHOD=ENTER APPYEAR BCKGTLAG CLAIMS FWDAPLAG GENERAL GYEAR ORIGINAL SECDLWBD SECDUPBD SELFCTLB SELFCTUB /RESIDUALS DURBIN /CASEWISE PLOT (ZRESID) OUTLIERS(3). |
|-----------|--|---|
| Resources | Processor Time                                   | 00:00:00.02   |
|           | Elapsed Time                                     | 00:00:00.01   |
|           | Memory Required                                  | 10800 bytes   |
|           | Additional Memory<br>Required for Residual Plots | 0 bytes   |

## Variables Entered/Removed<sup>a</sup>

| Model | Variables<br>Entered   | Variables<br>Removed | Method |
|-------|--|----------------------|--------|
| 1     | SELFCTUB,<br>CLAIMS,<br>GYEAR,<br>ORIGINAL,<br>BCKGTLAG,<br>SECDUPBD,<br>GENERAL,<br>FWDAPLAG,<br>APPYEAR,<br>SELFCTLB,<br>SECDLWBD <sup>b</sup> |                      | Enter  |

- a. Dependent Variable: CRECEIVE
- b. All requested variables entered.

# **Model Summary**<sup>b</sup>

|       |                   |          |                      |                            | Cha                | nge Statistics |     |
|-------|-------------------|----------|----------------------|----------------------------|--------------------|----------------|-----|
| Model | R                 | R Square | Adjusted R<br>Square | Std. Error of the Estimate | R Square<br>Change | F Change       | df1 |
| 1     | .443 <sup>a</sup> | .196     | .191                 | 4.098                      | .196               | 36.647         | 11  |

## **Model Summary**<sup>b</sup>

|       | Chang |               |               |
|-------|-------|---------------|---------------|
| Model | df2   | Sig. F Change | Durbin-Watson |
| 1     | 1655  | .000          | 1.970         |

- a. Predictors: (Constant), SELFCTUB, CLAIMS, GYEAR, ORIGINAL, BCKGTLAG, SECDUPBD, GENERAL, FWDAPLAG, APPYEAR, SELFCTLB, SECDLWBD
- b. Dependent Variable: CRECEIVE

#### **ANOVA**<sup>a</sup>

| Model |            | Sum of<br>Squares | df   | Mean Square | F      | Sig.              |
|-------|------------|-------------------|------|-------------|--------|-------------------|
| 1     | Regression | 6769.213          | 11   | 615.383     | 36.647 | .000 <sup>b</sup> |
|       | Residual   | 27790.817         | 1655 | 16.792      |        |                   |
|       | Total      | 34560.030         | 1666 |             |        |                   |

- a. Dependent Variable: CRECEIVE
- b. Predictors: (Constant), SELFCTUB, CLAIMS, GYEAR, ORIGINAL, BCKGTLAG, SECDUPBD, GENERAL, FWDAPLAG, APPYEAR, SELFCTLB, SECDLWBD

# Coefficients<sup>a</sup>

|       |            | Unstandardize | d Coefficients | Standardized<br>Coefficients |        |      |
|-------|------------|---------------|----------------|------------------------------|--------|------|
| Model |            | В             | Std. Error     | Beta                         | t      | Sig. |
| 1     | (Constant) | 1509.628      | 254.147        |                              | 5.940  | .000 |
|       | APPYEAR    | 281           | .167           | 078                          | -1.683 | .092 |
|       | BCKGTLAG   | 064           | .013           | 114                          | -4.805 | .000 |
|       | CLAIMS     | .027          | .008           | .074                         | 3.319  | .001 |
|       | FWDAPLAG   | 034           | .141           | 008                          | 244    | .807 |
|       | GENERAL    | 5.826         | .408           | .336                         | 14.264 | .000 |
|       | GYEAR      | 474           | .147           | 112                          | -3.232 | .001 |
|       | ORIGINAL   | -1.001        | .374           | 061                          | -2.676 | .008 |
|       | SECDLWBD   | -3.184        | 2.330          | 234                          | -1.367 | .172 |
|       | SECDUPBD   | 3.049         | 2.274          | .229                         | 1.341  | .180 |
|       | SELFCTLB   | -1.653        | 2.138          | 078                          | 773    | .440 |
|       | SELFCTUB   | 1.188         | 1.968          | .060                         | .604   | .546 |

## Coefficients<sup>a</sup>

|       |            | 95.0% Confiden | ice Interval for B | (          | Correlations |      | Collinearity<br>Statistics |
|-------|------------|----------------|--------------------|------------|--------------|------|----------------------------|
| Model |            | Lower Bound    | Upper Bound        | Zero-order | Partial      | Part | Tolerance                  |
| 1     | (Constant) | 1011.146       | 2008.111           |            |              |      |                            |
|       | APPYEAR    | 608            | .046               | 239        | 041          | 037  | .226                       |
|       | BCKGTLAG   | 091            | 038                | 124        | 117          | 106  | .865                       |
|       | CLAIMS     | .011           | .043               | .090       | .081         | .073 | .976                       |
|       | FWDAPLAG   | 311            | .242               | .143       | 006          | 005  | .409                       |
|       | GENERAL    | 5.024          | 6.627              | .385       | .331         | .314 | .877                       |
|       | GYEAR      | 762            | 187                | 243        | 079          | 071  | .406                       |
|       | ORIGINAL   | -1.735         | 267                | .007       | 066          | 059  | .938                       |
|       | SECDLWBD   | -7.753         | 1.385              | 039        | 034          | 030  | .017                       |
|       | SECDUPBD   | -1.411         | 7.509              | 033        | .033         | .030 | .017                       |
|       | SELFCTLB   | -5.847         | 2.541              | 007        | 019          | 017  | .048                       |
|       | SELFCTUB   | -2.672         | 5.047              | 010        | .015         | .013 | .049                       |

# Coefficients<sup>a</sup>

|       |            | Collinearity<br>Statistics |
|-------|------------|----------------------------|
| Model |            | VIF                        |
| 1     | (Constant) |                            |
|       | APPYEAR    | 4.417                      |
|       | BCKGTLAG   | 1.157                      |
|       | CLAIMS     | 1.025                      |
|       | FWDAPLAG   | 2.447                      |
|       | GENERAL    | 1.140                      |
|       | GYEAR      | 2.461                      |
|       | ORIGINAL   | 1.066                      |
|       | SECDLWBD   | 60.138                     |
|       | SECDUPBD   | 59.861                     |
|       | SELFCTLB   | 21.015                     |
|       | SELFCTUB   | 20.547                     |

a. Dependent Variable: CRECEIVE

## Coefficient Correlations<sup>a</sup>

| Model |              |          | SELFCTUB | CLAIMS   | GYEAR | ORIGINAL | BCKGTLAG |
|-------|--------------|----------|----------|----------|-------|----------|----------|
| 1     | Correlations | SELFCTUB | 1.000    | .013     | 021   | .011     | 257      |
|       |              | CLAIMS   | .013     | 1.000    | 089   | 088      | .003     |
|       |              | GYEAR    | 021      | 089      | 1.000 | 091      | .072     |
|       |              | ORIGINAL | .011     | 088      | 091   | 1.000    | 080      |
|       |              | BCKGTLAG | 257      | .003     | .072  | 080      | 1.000    |
|       |              | SECDUPBD | 038      | 031      | .053  | .029     | 102      |
|       |              | GENERAL  | 019      | 043      | .095  | 194      | .114     |
|       |              | FWDAPLAG | .005     | 012      | 237   | .019     | 101      |
|       |              | APPYEAR  | .009     | .057     | 677   | .057     | 064      |
|       |              | SELFCTLB | 974      | 014      | .033  | 003      | .288     |
|       |              | SECDLWBD | .038     | .030     | 051   | 028      | .100     |
|       | Covariances  | SELFCTUB | 3.872    | .000     | 006   | .008     | 007      |
|       |              | CLAIMS   | .000     | 6.632E-5 | .000  | .000     | 3.690E-7 |
|       | GYEAR        | 006      | .000     | .022     | 005   | .000     |          |
|       |              | ORIGINAL | .008     | .000     | 005   | .140     | .000     |
|       |              | BCKGTLAG | 007      | 3.690E-7 | .000  | .000     | .000     |
|       |              | SECDUPBD | 171      | 001      | .018  | .024     | 003      |

## **Coefficient Correlations**<sup>a</sup>

| Model |              |          | SECDUPBD | GENERAL | FWDAPLAG  | APPYEAR  |
|-------|--------------|----------|----------|---------|-----------|----------|
| 1     | Correlations | SELFCTUB | 038      | 019     | .005      | .009     |
|       |              | CLAIMS   | 031      | 043     | 012       | .057     |
|       |              | GYEAR    | .053     | .095    | 237       | 677      |
|       |              | ORIGINAL | .029     | 194     | .019      | .057     |
|       |              | BCKGTLAG | 102      | .114    | 101       | 064      |
|       |              | SECDUPBD | 1.000    | 023     | 037       | 013      |
|       |              | GENERAL  | 023      | 1.000   | .041      | .093     |
|       |              | FWDAPLAG | 037      | .041    | 1.000     | .688     |
|       |              | APPYEAR  | 013      | .093    | .688      | 1.000    |
|       |              | SELFCTLB | .041     | .023    | 008       | 017      |
|       |              | SECDLWBD | 991      | .028    | .042      | .010     |
|       | Covariances  | SELFCTUB | 171      | 015     | .001      | .003     |
|       |              | CLAIMS   | 001      | .000    | -1.401E-5 | 7.754E-5 |
|       |              | GYEAR    | .018     | .006    | 005       | 017      |
|       |              | ORIGINAL | .024     | 030     | .001      | .004     |
|       |              | BCKGTLAG | 003      | .001    | .000      | .000     |
|       |              | SECDUPBD | 5.170    | 022     | 012       | 005      |

## Coefficient Correlations<sup>a</sup>

| Model |              |          | SELFCTLB | SECDLWBD |
|-------|--------------|----------|----------|----------|
| 1     | Correlations | SELFCTUB | 974      | .038     |
|       |              | CLAIMS   | 014      | .030     |
|       |              | GYEAR    | .033     | 051      |
|       |              | ORIGINAL | 003      | 028      |
|       |              | BCKGTLAG | .288     | .100     |
|       |              | SECDUPBD | .041     | 991      |
|       |              | GENERAL  | .023     | .028     |
|       |              | FWDAPLAG | 008      | .042     |
|       |              | APPYEAR  | 017      | .010     |
|       |              | SELFCTLB | 1.000    | 048      |
|       |              | SECDLWBD | 048      | 1.000    |
|       | Covariances  | SELFCTUB | -4.097   | .176     |
|       |              | CLAIMS   | .000     | .001     |
|       |              | GYEAR    | .010     | 017      |
|       |              | ORIGINAL | 003      | 025      |
|       |              | BCKGTLAG | .008     | .003     |
|       |              | SECDUPBD | .201     | -5.250   |

## **Coefficient Correlations**<sup>a</sup>

| Model |          | SELFCTUB | CLAIMS    | GYEAR | ORIGINAL | BCKGTLAG |
|-------|----------|----------|-----------|-------|----------|----------|
|       | GENERAL  | 015      | .000      | .006  | 030      | .001     |
|       | FWDAPLAG | .001     | -1.401E-5 | 005   | .001     | .000     |
|       | APPYEAR  | .003     | 7.754E-5  | 017   | .004     | .000     |
|       | SELFCTLB | -4.097   | .000      | .010  | 003      | .008     |
|       | SECDLWBD | .176     | .001      | 017   | 025      | .003     |

## **Coefficient Correlations**<sup>a</sup>

| Model |          | SECDUPBD | GENERAL | FWDAPLAG | APPYEAR |
|-------|----------|----------|---------|----------|---------|
|       | GENERAL  | 022      | .167    | .002     | .006    |
|       | FWDAPLAG | 012      | .002    | .020     | .016    |
|       | APPYEAR  | 005      | .006    | .016     | .028    |
|       | SELFCTLB | .201     | .020    | 003      | 006     |
|       | SECDLWBD | -5.250   | .027    | .014     | .004    |

## **Coefficient Correlations**<sup>a</sup>

| Model |          | SELFCTLB | SECDLWBD |
|-------|----------|----------|----------|
|       | GENERAL  | .020     | .027     |
|       | FWDAPLAG | 003      | .014     |
|       | APPYEAR  | 006      | .004     |
|       | SELFCTLB | 4.571    | 237      |
|       | SECDLWBD | 237      | 5.427    |

a. Dependent Variable: CRECEIVE

# Collinearity Diagnostics<sup>a</sup>

|       |           |            |                 |            | Variance F | Proportions |        |
|-------|-----------|------------|-----------------|------------|------------|-------------|--------|
| Model | Dimension | Eigenvalue | Condition Index | (Constant) | APPYEAR    | BCKGTLAG    | CLAIMS |
| 1     | 1         | 7.500      | 1.000           | .00        | .00        | .00         | .00    |
|       | 2         | 1.607      | 2.161           | .00        | .00        | .01         | .01    |
|       | 3         | 1.189      | 2.512           | .00        | .00        | .00         | .00    |
|       | 4         | .598       | 3.540           | .00        | .00        | .08         | .00    |
|       | 5         | .380       | 4.444           | .00        | .00        | .23         | .70    |
|       | 6         | .290       | 5.083           | .00        | .00        | .14         | .12    |
|       | 7         | .259       | 5.381           | .00        | .00        | .42         | .13    |
|       | 8         | .153       | 7.009           | .00        | .00        | .01         | .02    |
|       | 9         | .018       | 20.291          | .00        | .00        | .09         | .00    |
|       | 10        | .006       | 34.531          | .00        | .00        | .01         | .00    |
|       | 11        | 1.112E-7   | 8214.054        | .86        | .03        | .00         | .00    |
|       | 12        | 5.913E-8   | 11262.073       | .14        | .97        | .00         | .00    |

# Collinearity Diagnostics<sup>a</sup>

Variance Proportions

| Model | Dimension | FWDAPLAG | GENERAL | GYEAR | ORIGINAL | SECDLWBD | SECDUPBD |
|-------|-----------|----------|---------|-------|----------|----------|----------|
| 1     | 1         | .00      | .00     | .00   | .00      | .00      | .00      |
|       | 2         | .00      | .01     | .00   | .01      | .00      | .00      |
|       | 3         | .00      | .00     | .00   | .00      | .00      | .00      |
|       | 4         | .00      | .74     | .00   | .00      | .00      | .00      |
|       | 5         | .00      | .04     | .00   | .00      | .00      | .00      |
|       | 6         | .01      | .10     | .00   | .76      | .00      | .00      |
|       | 7         | .10      | .04     | .00   | .12      | .00      | .00      |
|       | 8         | .32      | .01     | .00   | .10      | .00      | .00      |
|       | 9         | .00      | .00     | .00   | .00      | .00      | .00      |
|       | 10        | .00      | .00     | .00   | .00      | .99      | .99      |
|       | 11        | .18      | .05     | .37   | .00      | .00      | .00      |
|       | 12        | .39      | .00     | .63   | .00      | .00      | .00      |

# Collinearity Diagnostics<sup>a</sup>

Variance Proportions

|       |           | variatioo i | roportiono |
|-------|-----------|-------------|------------|
| Model | Dimension | SELFCTLB    | SELFCTUB   |
| 1     | 1         | .00         | .00        |
|       | 2         | .00         | .00        |
|       | 3         | .01         | .01        |
|       | 4         | .00         | .00        |
|       | 5         | .00         | .00        |
|       | 6         | .00         | .00        |
|       | 7         | .00         | .00        |
|       | 8         | .00         | .00        |
|       | 9         | .98         | .98        |
|       | 10        | .00         | .00        |
|       | 11        | .00         | .00        |
|       | 12        | .00         | .00        |

a. Dependent Variable: CRECEIVE

## Casewise Diagnostics<sup>a</sup>

| Case Number | Std. Residual | CRECEIVE | Predicted Value | Residual |
|-------------|---------------|----------|-----------------|----------|
| 30          | 3.911         | 23       | 6.98            | 16.024   |
| 153         | 6.131         | 32       | 6.88            | 25.125   |
| 202         | 8.840         | 42       | 5.78            | 36.224   |
| 230         | 25.144        | 112      | 8.96            | 103.036  |
| 243         | 4.366         | 23       | 5.11            | 17.892   |
| 405         | 3.015         | 18       | 5.65            | 12.355   |
| 446         | 4.977         | 25       | 4.61            | 20.393   |
| 457         | 6.329         | 31       | 5.07            | 25.934   |
| 585         | 3.081         | 20       | 7.37            | 12.626   |
| 759         | 3.309         | 21       | 7.44            | 13.560   |
| 879         | 4.839         | 26       | 6.17            | 19.830   |
| 1063        | 8.040         | 38       | 5.05            | 32.947   |
| 1116        | 4.651         | 22       | 2.94            | 19.059   |
| 1220        | 6.530         | 33       | 6.24            | 26.759   |
| 1680        | 5.189         | 26       | 4.74            | 21.264   |
| 1786        | 3.470         | 21       | 6.78            | 14.219   |

a. Dependent Variable: CRECEIVE

#### **Residuals Statistics**<sup>a</sup>

|                      | Minimum | Maximum | Mean | Std. Deviation | N    |
|----------------------|---------|---------|------|----------------|------|
| Predicted Value      | -2.11   | 9.70    | 3.30 | 2.016          | 1667 |
| Residual             | -5.320  | 103.036 | .000 | 4.084          | 1667 |
| Std. Predicted Value | -2.682  | 3.175   | .000 | 1.000          | 1667 |
| Std. Residual        | -1.298  | 25.144  | .000 | .997           | 1667 |

a. Dependent Variable: CRECEIVE

\* Chart Builder.

#### GGRAPH

/GRAPHDATASET NAME="graphdataset" VARIABLES=GENERAL CRECEIVE MISSING=LISTWIS

E REPORTMISSINGNO

/GRAPHSPEC SOURCE=INLINE

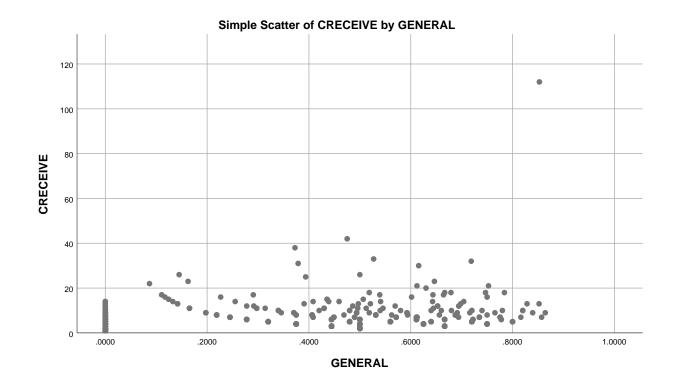
/FITLINE TOTAL=NO.

```
BEGIN GPL
SOURCE: s=userSource(id("graphdataset"))
DATA: GENERAL=col(source(s), name("GENERAL"))
DATA: CRECEIVE=col(source(s), name("CRECEIVE"))
GUIDE: axis(dim(1), label("GENERAL"))
GUIDE: axis(dim(2), label("CRECEIVE"))
GUIDE: text.title(label("Simple Scatter of CRECEIVE by GENERAL"))
ELEMENT: point(position(GENERAL*CRECEIVE))
END GPL.
```

#### **GGraph**

| Output Creat | ed                                | 19-SEP-2018 21:23:57   |
|--------------|-----------------------------------|--|
| Comments     |                                   |  |
| Input        | Data                              | D: \SOC6100\Assignments\A ssignment01\Results\Resu lts1995to1999\Townes_S OC6100_Assignment01_D ata_Sample.sav |
|              | Active Dataset                    | DataSet1   |
|              | Filter                            | <none></none>  |
|              | Weight                            | <none></none>  |
|              | Split File                        | <none></none>  |
|              | N of Rows in Working Data<br>File | 2000   |

| Syntax    |                | GGRAPH /GRAPHDATASET NAME="graphdataset" VARIABLES=GENERAL CRECEIVE MISSING=LISTWISE REPORTMISSING=NO /GRAPHSPEC SOURCE=INLINE /FITLINE TOTAL=NO. BEGIN GPL SOURCE: s=userSource (id("graphdataset")) DATA: GENERAL=col (source(s), name ("GENERAL")) DATA: CRECEIVE=col (source(s), name ("CRECEIVE")) GUIDE: axis(dim(1), label ("GENERAL")) GUIDE: axis(dim(2), label ("CRECEIVE")) GUIDE: text.title(label ("Simple Scatter of CRECEIVE by GENERAL")) ELEMENT: point(position (GENERAL*CRECEIVE)) END GPL. |
|-----------|----------------|--|
| Resources | Processor Time | 00:00:03.59  |
|           | Elapsed Time   | 00:00:01.51  |



\* Chart Builder.

```
GGRAPH
```

```
/GRAPHDATASET NAME="graphdataset" VARIABLES=ORIGINAL CRECEIVE MISSING=LISTWI
SE REPORTMISSINGNO
```

/GRAPHSPEC SOURCE=INLINE

/FITLINE TOTAL=NO.

```
BEGIN GPL
  SOURCE: s=userSource(id("graphdataset"))
  DATA: ORIGINAL=col(source(s), name("ORIGINAL"))
  DATA: CRECEIVE=col(source(s), name("CRECEIVE"))
  GUIDE: axis(dim(1), label("ORIGINAL"))
  GUIDE: axis(dim(2), label("CRECEIVE"))
  GUIDE: text.title(label("Simple Scatter of CRECEIVE by ORIGINAL"))
  ELEMENT: point(position(ORIGINAL*CRECEIVE))
END GPL.
```

#### **GGraph**

|           | ted                            | 19-SEP-2018 21:24:58  |
|-----------|--------------------------------|---|
| Comments  |                                |   |
| Input     | Data                           | D: \SOC6100\Assignments\A ssignment01\Results\Resu lts1995to1999\Townes_S OC6100_Assignment01_D ata_Sample.sav  |
|           | Active Dataset                 | DataSet1  |
|           | Filter                         | <none></none>   |
|           | Weight                         | <none></none>   |
|           | Split File                     | <none></none>   |
|           | N of Rows in Working Data File | 2000  |
| Syntax    |                                | GGRAPH /GRAPHDATASET NAME="graphdataset" VARIABLES=ORIGINAL CRECEIVE MISSING=LISTWISE REPORTMISSING=NO /GRAPHSPEC SOURCE=INLINE   |
|           |                                | /FITLINE TOTAL=NO. BEGIN GPL SOURCE: s=userSource (id("graphdataset")) DATA: ORIGINAL=col (source(s), name ("ORIGINAL")) DATA: CRECEIVE=col (source(s), name ("CRECEIVE")) GUIDE: axis(dim(1), label ("ORIGINAL")) GUIDE: axis(dim(2), label ("CRECEIVE")) GUIDE: text.title(label ("Simple Scatter of CRECEIVE by ORIGINAL")) ELEMENT: point(position (ORIGINAL*CRECEIVE)) FND GPL |
| Resources | Processor Time                 | BEGIN GPL SOURCE: s=userSource (id("graphdataset")) DATA: ORIGINAL=col (source(s), name ("ORIGINAL")) DATA: CRECEIVE=col (source(s), name ("CRECEIVE")) GUIDE: axis(dim(1), label ("ORIGINAL")) GUIDE: axis(dim(2), label ("CRECEIVE")) GUIDE: text.title(label ("Simple Scatter of CRECEIVE by ORIGINAL")) ELEMENT: point(position   |

