

บรรณานุกรม

ภาษาไทย

วันชัย วิจิตรนิส. การวิเคราะห์โครงข่าย. กรุงเทพมหานคร:

ภาควิชาวิศวกรรมอุตสาหกรรม จุฬาลงกรณ์มหาวิทยาลัย, 2528.

วิสูตร ทองวิวัฒน์. การประเมินผลของวิธีการคาดการณ์การขนส่งของรถบรรทุก.

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ภาคผนวก ก

ข้อมูลรายการสั่งซื้อสินค้าที่ใช้ทดสอบแบบจำลอง

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| 11/12/92 | 120018 | 900919 | SKH1504 | 0 | 35 |
| 11/12/92 | 120019 | 900919 | SKH1504 | 0 | 46 |
| 11/12/92 | 120020 | 900919 | SKH1504 | 0 | 132 |
| 11/12/92 | 120021 | 900919 | SKH1504 | 0 | 12 |
| 11/12/92 | 120022 | 900919 | SKH1504 | 33 | 0 |
| 11/12/92 | 120023 | 900919 | SKH1504 | 0 | 11 |
| 11/12/92 | 120024 | 892661 | RAM1201 | 0 | 103 |

| Date | INV.code | CUS.code | BLC.code | Detergent | Toilet_Art. |
|----------|----------|----------|----------|-----------|-------------|
| 11/12/92 | 120025 | 892661 | RAM1201 | 0 | 136 |
| 11/12/92 | 120026 | 892661 | RAM1201 | 0 | 36 |
| 11/12/92 | 120027 | 892661 | RAM1201 | 33 | 27 |
| 11/12/92 | 120028 | 892661 | RAM1201 | 0 | 50 |
| 11/12/92 | 120029 | 892661 | RAM1201 | 27 | 200 |
| 11/12/92 | 120030 | 835770 | SKH1505 | 6 | 0 |
| 11/12/92 | 120031 | 831981 | SKH1505 | 3 | 0 |
| 11/12/92 | 120032 | 765413 | SKH5301 | 20 | 0 |
| 11/12/92 | 120033 | 902098 | SKH1505 | 33 | 50 |
| 11/12/92 | 120034 | 902098 | SKH1505 | 70 | 43 |
| 11/12/92 | 120035 | 902098 | SKH1505 | 0 | 73 |
| 11/12/92 | 120036 | 902098 | SKH1505 | 0 | 6 |
| 11/12/92 | 120037 | 900919 | SKH1504 | 0 | 18 |
| 11/13/92 | 130001 | 894203 | SKH1503 | 0 | 27 |
| 11/13/92 | 130002 | 902108 | KLO1501 | 0 | 160 |
| 11/13/92 | 130003 | 900919 | SKH1504 | 0 | 21 |
| 11/13/92 | 130004 | 894203 | SKH1503 | 0 | 2 |
| 11/13/92 | 130005 | 894203 | SKH1503 | 0 | 1 |
| 11/13/92 | 130006 | 900919 | SKH1504 | 0 | 76 |
| 11/13/92 | 130007 | 900919 | SKH1504 | 18 | 0 |
| 11/13/92 | 130008 | 900919 | SKH1504 | 0 | 50 |
| 11/13/92 | 130009 | 900919 | SKH1504 | 51 | 0 |
| 11/13/92 | 130010 | 900919 | SKH1504 | 0 | 10 |
| 11/13/92 | 130011 | 831378 | SRI1301 | 3 | 17 |
| 11/13/92 | 130012 | 893675 | RAM1201 | 0 | 129 |
| 11/13/92 | 130013 | 893675 | RAM1201 | 0 | 82 |
| 11/13/92 | 130014 | 893675 | RAM1201 | 0 | 45 |
| 11/13/92 | 130015 | 893675 | RAM1201 | 0 | 70 |
| 11/13/92 | 130016 | 893675 | RAM1201 | 0 | 25 |
| 11/13/92 | 130017 | 893675 | RAM1201 | 102 | 0 |
| 11/13/92 | 130018 | 893675 | RAM1201 | 61 | 0 |
| 11/13/92 | 130019 | 893675 | RAM1201 | 145 | 0 |
| 11/13/92 | 130020 | 893675 | RAM1201 | 69 | 0 |
| 11/13/92 | 130021 | 893675 | RAM1201 | 0 | 86 |
| 11/13/92 | 130022 | 893675 | RAM1201 | 25 | 56 |
| 11/13/92 | 130023 | 893675 | RAM1201 | 0 | 82 |
| 11/13/92 | 130024 | 893675 | RAM1201 | 0 | 34 |
| 11/13/92 | 130025 | 893675 | RAM1201 | 0 | 60 |
| 11/13/92 | 130026 | 893675 | RAM1201 | 0 | 35 |
| 11/13/92 | 130027 | 893675 | RAM1201 | 0 | 30 |
| 11/13/92 | 130028 | 893675 | RAM1201 | 0 | 68 |
| 11/13/92 | 130029 | 902108 | KLO1501 | 51 | 209 |
| 11/13/92 | 130031 | 892661 | RAM1201 | 0 | 33 |
| 11/13/92 | 130032 | 892661 | RAM1201 | 80 | 52 |
| 11/13/92 | 130033 | 892661 | RAM1201 | 87 | 25 |
| 11/13/92 | 130034 | 834289 | KLO1501 | 10 | 0 |
| 11/13/92 | 130035 | 902108 | KLO1501 | 0 | 279 |
| 11/13/92 | 130036 | 902098 | SKH1505 | 20 | 0 |
| 11/13/92 | 130037 | 893738 | RAM1201 | 0 | 200 |
| 11/14/92 | 140001 | 838545 | PAT1301 | 0 | 215 |
| 11/14/92 | 140002 | 835195 | PAT1301 | 142 | 193 |
| 11/14/92 | 140003 | 893675 | RAM1201 | 0 | 10 |
| 11/14/92 | 140004 | 891374 | RAM1201 | 0 | 30 |
| 11/14/92 | 140005 | 891374 | RAM1201 | 0 | 2 |
| 11/14/92 | 140006 | 891374 | RAM1201 | 0 | 13 |
| 11/14/92 | 140015 | 902098 | SKH1505 | 0 | 76 |

| Date | INV.code | CUS.code | BLC.code | Detergent | Toilet_Art. |
|----------|----------|----------|----------|-----------|-------------|
| 11/14/92 | 140016 | 902098 | SKH1505 | 0 | 3 |
| 11/14/92 | 140017 | 902098 | SKH1505 | 0 | 21 |
| 11/14/92 | 140018 | 835507 | ONN1301 | 10 | 0 |
| 11/16/92 | 160001 | 893675 | RAM1201 | 51 | 0 |
| 11/16/92 | 160002 | 893675 | RAM1201 | 0 | 2 |
| 11/16/92 | 160003 | 832537 | SUN1501 | 24 | 0 |
| 11/16/92 | 160004 | 831391 | KLO1501 | 130 | 0 |
| 11/16/92 | 160005 | 835195 | PAT1301 | 0 | 2 |
| 11/16/92 | 160006 | 838545 | PAT1301 | 0 | 2 |
| 11/16/92 | 160007 | 838545 | PAT1301 | 226 | 76 |
| 11/16/92 | 160008 | 767424 | SKH5303 | 98 | 178 |
| 11/16/92 | 160009 | 902108 | KLO1501 | 0 | 7 |
| 11/16/92 | 160010 | 902108 | KLO1501 | 0 | 42 |
| 11/16/92 | 160011 | 902108 | KLO1501 | 0 | 3 |
| 11/16/92 | 160012 | 893675 | RAM1201 | 212 | 0 |
| 11/16/92 | 160013 | 893675 | RAM1201 | 228 | 81 |
| 11/16/92 | 160014 | 893675 | RAM1201 | 0 | 258 |
| 11/16/92 | 160015 | 893675 | RAM1201 | 0 | 110 |
| 11/16/92 | 160016 | 893675 | RAM1201 | 0 | 115 |
| 11/16/92 | 160017 | 893675 | RAM1201 | 51 | 0 |
| 11/16/92 | 160018 | 893675 | RAM1201 | 335 | 0 |
| 11/16/92 | 160019 | 902108 | KLO1501 | 50 | 0 |
| 11/16/92 | 160020 | 893592 | RAM1201 | 34 | 0 |
| 11/16/92 | 160021 | 893592 | RAM1201 | 0 | 16 |
| 11/16/92 | 160022 | 893592 | RAM1201 | 0 | 7 |
| 11/16/92 | 160023 | 893592 | RAM1201 | 0 | 4 |
| 11/17/92 | 170003 | 835195 | PAT1301 | 206 | 90 |
| 11/17/92 | 170004 | 892661 | RAM1201 | 0 | 3 |
| 11/17/92 | 170005 | 891374 | RAM1201 | 0 | 10 |
| 11/17/92 | 170006 | 892438 | RAM1201 | 27 | 22 |
| 11/17/92 | 170007 | 892438 | RAM1201 | 0 | 40 |
| 11/17/92 | 170008 | 890994 | SKH5301 | 76 | 0 |
| 11/17/92 | 170009 | 890995 | BAN1402 | 75 | 0 |
| 11/17/92 | 170010 | 890993 | SKH5301 | 74 | 0 |
| 11/17/92 | 170011 | 761077 | SKH5301 | 38 | 159 |
| 11/17/92 | 170012 | 761077 | SKH5301 | 0 | 2 |
| 11/17/92 | 170013 | 902108 | KLO1501 | 0 | 56 |
| 11/17/92 | 170014 | 902108 | KLO1501 | 0 | 68 |
| 11/17/92 | 170015 | 902108 | KLO1501 | 0 | 4 |
| 11/17/92 | 170019 | 892438 | RAM1201 | 2 | 3 |
| 11/17/92 | 170020 | 892438 | RAM1201 | 0 | 1 |
| 11/17/92 | 170021 | 892438 | RAM1201 | 0 | 5 |
| 11/17/92 | 170022 | 893675 | RAM1201 | 0 | 1 |
| 11/17/92 | 170023 | 893675 | RAM1201 | 0 | 535 |
| 11/17/92 | 170024 | 894203 | SKH1503 | 0 | 12 |
| 11/17/92 | 170025 | 893738 | RAM1201 | 0 | 16 |
| 11/17/92 | 170026 | 893592 | RAM1201 | 0 | 200 |
| 11/17/92 | 170027 | 893592 | RAM1201 | 0 | 10 |
| 11/17/92 | 170028 | 831376 | ONN1301 | 100 | 18 |
| 11/17/92 | 170029 | 834823 | ONN1301 | 0 | 79 |
| 11/17/92 | 170030 | 835507 | ONN1301 | 12 | 17 |
| 11/17/92 | 170031 | 834823 | ONN1301 | 0 | 20 |
| 11/17/92 | 170032 | 902483 | SRI5301 | 15 | 35 |
| 11/18/92 | 180004 | 893657 | SKH1503 | 4 | 24 |
| 11/18/92 | 180005 | 893657 | SKH1503 | 0 | 10 |
| 11/18/92 | 180006 | 893657 | SKH1503 | 0 | 31 |



| Date | INV.code | CUS.code | BLC.code | Detergent | Toilet_Art. |
|----------|----------|----------|----------|-----------|-------------|
| 11/18/92 | 180007 | 893657 | SKH1503 | 43 | 1 |
| 11/18/92 | 180008 | 893738 | RAM1201 | 0 | 31 |
| 11/18/92 | 180009 | 893592 | RAM1201 | 0 | 6 |
| 11/18/92 | 180010 | 893738 | RAM1201 | 0 | 2 |
| 11/18/92 | 180011 | 893592 | RAM1201 | 0 | 31 |
| 11/18/92 | 180012 | 893592 | RAM1201 | 0 | 2 |
| 11/18/92 | 180013 | 893592 | RAM1201 | 0 | 15 |
| 11/18/92 | 180014 | 893592 | RAM1201 | 0 | 18 |
| 11/19/92 | 190001 | 838545 | PAT1301 | 175 | 128 |
| 11/19/92 | 190002 | 838545 | PAT1301 | 30 | 0 |
| 11/19/92 | 190003 | 838545 | PAT1301 | 30 | 0 |
| 11/19/92 | 190004 | 900919 | SKH1504 | 0 | 15 |
| 11/19/92 | 190005 | 833484 | KLO1501 | 16 | 4 |
| 11/19/92 | 190006 | 832825 | PRA1501 | 26 | 0 |
| 11/19/92 | 190007 | 831569 | PRA1501 | 0 | 37 |
| 11/19/92 | 190008 | 831569 | PRA1501 | 0 | 53 |
| 11/19/92 | 190009 | 835178 | SUN1501 | 29 | 0 |
| 11/20/92 | 200001 | 835179 | SUN1501 | 105 | 0 |
| 11/20/92 | 200002 | 832537 | SUN1501 | 21 | 2 |
| 11/20/92 | 200003 | 831376 | ONN1301 | 18 | 10 |
| 11/20/92 | 200004 | 834823 | ONN1301 | 0 | 40 |
| 11/20/92 | 200005 | 898384 | PAT1301 | 4 | 0 |
| 11/20/92 | 200006 | 835507 | ONN1301 | 14 | 0 |
| 11/20/92 | 200007 | 767424 | SKH5303 | 0 | 10 |
| 11/21/92 | 210001 | 835783 | ONN1301 | 21 | 16 |
| 11/21/92 | 210002 | 898384 | PAT1301 | 53 | 0 |
| 11/21/92 | 210003 | 892687 | ONN1302 | 0 | 3 |
| 11/21/92 | 210004 | 892687 | ONN1302 | 0 | 21 |
| 11/21/92 | 210005 | 892687 | ONN1302 | 0 | 31 |
| 11/21/92 | 210006 | 890994 | SKH5301 | 50 | 0 |
| 11/21/92 | 210007 | 890993 | SKH5301 | 112 | 0 |
| 11/21/92 | 210008 | 890993 | SKH5301 | 30 | 0 |
| 11/21/92 | 210009 | 890993 | SKH5301 | 48 | 0 |
| 11/21/92 | 210010 | 890993 | SKH5301 | 110 | 0 |
| 11/21/92 | 210011 | 890993 | SKH5301 | 0 | 21 |
| 11/21/92 | 210012 | 890993 | SKH5301 | 0 | 44 |
| 11/21/92 | 210013 | 890993 | SKH5301 | 0 | 20 |
| 11/21/92 | 210014 | 761239 | SKH5303 | 50 | 0 |
| 11/21/92 | 210015 | 761297 | TAP5301 | 50 | 0 |
| 11/23/92 | 230001 | 835194 | PAT1301 | 105 | 189 |
| 11/23/92 | 230002 | 890994 | SKH5301 | 0 | 10 |
| 11/23/92 | 230003 | 890994 | SKH5301 | 51 | 0 |
| 11/23/92 | 230004 | 890994 | SKH5301 | 0 | 152 |
| 11/23/92 | 230005 | 890994 | SKH5301 | 69 | 0 |
| 11/23/92 | 230006 | 890994 | SKH5301 | 112 | 0 |
| 11/23/92 | 230007 | 890994 | SKH5301 | 24 | 30 |
| 11/23/92 | 230008 | 890994 | SKH5301 | 0 | 5 |
| 11/23/92 | 230009 | 890994 | SKH5301 | 0 | 3 |
| 11/23/92 | 230010 | 890994 | SKH5301 | 0 | 55 |
| 11/23/92 | 230011 | 890994 | SKH5301 | 0 | 12 |
| 11/23/92 | 230012 | 890994 | SKH5301 | 0 | 200 |
| 11/23/92 | 230013 | 890994 | SKH5301 | 0 | 30 |
| 11/23/92 | 230014 | 890994 | SKH5301 | 0 | 46 |
| 11/23/92 | 230015 | 890994 | SKH5301 | 0 | 30 |
| 11/23/92 | 230016 | 890994 | SKH5301 | 0 | 8 |
| 11/23/92 | 230017 | 890994 | SKH5301 | 0 | 10 |

| Date | INV.code | CUS.code | BLC.code | Detergent | Toilet_Art. |
|----------|----------|----------|----------|-----------|-------------|
| 11/23/92 | 230018 | 890994 | SKH5301 | 143 | 0 |
| 11/23/92 | 230019 | 890994 | SKH5301 | 0 | 105 |
| 11/23/92 | 230020 | 890993 | SKH5301 | 90 | 0 |
| 11/23/92 | 230021 | 890993 | SKH5301 | 0 | 14 |
| 11/23/92 | 230022 | 890993 | SKH5301 | 0 | 50 |
| 11/23/92 | 230023 | 890993 | SKH5301 | 0 | 106 |
| 11/23/92 | 230024 | 890993 | SKH5301 | 0 | 3 |
| 11/23/92 | 230025 | 890993 | SKH5301 | 0 | 44 |
| 11/23/92 | 230026 | 890993 | SKH5301 | 0 | 15 |
| 11/23/92 | 230027 | 890993 | SKH5301 | 0 | 10 |
| 11/23/92 | 230028 | 890993 | SKH5301 | 0 | 15 |
| 11/23/92 | 230029 | 890993 | SKH5301 | 0 | 12 |
| 11/23/92 | 230030 | 890993 | SKH5301 | 0 | 180 |
| 11/23/92 | 230031 | 764045 | SKH5303 | 0 | 5 |
| 11/23/92 | 230032 | 763981 | SKH5303 | 10 | 16 |
| 11/23/92 | 230033 | 763981 | SKH5303 | 0 | 2 |
| 11/23/92 | 230034 | 761077 | SKH5301 | 0 | 280 |
| 11/23/92 | 230035 | 764016 | SKH5301 | 0 | 10 |
| 11/23/92 | 230036 | 764016 | SKH5301 | 12 | 0 |
| 11/23/92 | 230037 | 764016 | SKH5301 | 0 | 1 |
| 11/23/92 | 230038 | 761297 | TAP5301 | 0 | 10 |
| 11/23/92 | 230039 | 761077 | SKH5301 | 3 | 111 |
| 11/23/92 | 230040 | 761077 | SKH5301 | 10 | 0 |
| 11/23/92 | 230041 | 764087 | SKH5301 | 0 | 5 |
| 11/23/92 | 230042 | 767602 | SKH5301 | 0 | 5 |
| 11/23/92 | 230043 | 761077 | SKH5301 | 6 | 0 |
| 11/23/92 | 230044 | 764016 | SKH5301 | 0 | 20 |
| 11/24/92 | 240001 | 890994 | SKH5301 | 51 | 0 |
| 11/24/92 | 240002 | 890994 | SKH5301 | 0 | 10 |
| 11/24/92 | 240003 | 890994 | SKH5301 | 0 | 10 |
| 11/24/92 | 240004 | 890994 | SKH5301 | 33 | 0 |
| 11/24/92 | 240005 | 890993 | SKH5301 | 51 | 0 |
| 11/24/92 | 240006 | 834823 | ONN1301 | 0 | 20 |
| 11/24/92 | 240007 | 835507 | ONN1301 | 0 | 4 |
| 11/24/92 | 240008 | 831378 | SRI1301 | 2 | 0 |
| 11/24/92 | 240009 | 834823 | ONN1301 | 0 | 97 |
| 11/24/92 | 240010 | 761077 | SKH5301 | 0 | 10 |
| 11/24/92 | 240011 | 764255 | PUJ5101 | 15 | 7 |
| 11/25/92 | 250001 | 767424 | SKH5303 | 0 | 5 |
| 11/25/92 | 250002 | 764460 | SKH5303 | 40 | 9 |
| 11/25/92 | 250003 | 761239 | SKH5303 | 50 | 0 |
| 11/25/92 | 250004 | 767424 | SKH5303 | 0 | 237 |
| 11/25/92 | 250005 | 891426 | RAM1201 | 0 | 4 |
| 11/25/92 | 250006 | 891426 | RAM1201 | 0 | 9 |
| 11/25/92 | 250007 | 831378 | SRI1301 | 0 | 40 |
| 11/25/92 | 250008 | 901277 | RAM1201 | 51 | 0 |
| 11/25/92 | 250009 | 835195 | PAT1301 | 0 | 20 |
| 11/25/92 | 250010 | 838545 | PAT1301 | 0 | 70 |
| 11/25/92 | 250011 | 835195 | PAT1301 | 172 | 65 |

ภาคผนวก ข

รายชื่อเพิ่มข้อมูลและโครงสร้างเพิ่มข้อมูล

Structure for database: C:\FOXPRO2\THEISIS\BLCK_MAS.DBF

Number of data records: 32

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | BLC_CODE | Character | 7 | | |
| 2 | BLC_LCTN | Character | 40 | | |
| ** Total ** | | | 48 | | |

Structure for database: C:\FOXPRO2\THEISIS\CUST_MAS.DBF

Number of data records: 201

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | CUS_CODE | Character | 6 | | |
| 2 | CUS_NAME | Character | 30 | | |
| 3 | CUS_ADDR | Character | 40 | | |
| 4 | BLC_CODE | Character | 7 | | |
| 5 | CUS_IDLE | Numeric | 2 | | |
| 6 | CUS_HAND | Numeric | 2 | | Desc |
| ** Total ** | | | 88 | | |

Structure for database: C:\FOXPRO2\THEISIS\DATA_MAS.DBF

Number of data records: 4

Date of last update : 01/15/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|---------|-------|-----|-------|
| 1 | DATA_MAS | Numeric | 8 | 2 | |
| ** Total ** | | | 9 | | |

Structure for database: C:\FOXPRO2\THEISIS\LINK_MAS.DBF

Number of data records: 527

Date of last update : 11/12/92

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | BLC_FROM | Character | 7 | | |
| 2 | BLC_TO | Character | 7 | | |
| 3 | STR_BLC1 | Character | 8 | | |
| 4 | STR_BLC2 | Character | 8 | | |
| 5 | STR_BLC3 | Character | 8 | | |
| 6 | STR_BLC4 | Character | 8 | | |
| 7 | STR_BLC5 | Character | 8 | | |
| 8 | STR_BLC6 | Character | 8 | | |
| 9 | STR_BLC7 | Character | 8 | | |
| 10 | STR_BLC8 | Character | 8 | | |
| 11 | STR_BLC9 | Character | 8 | | |
| 12 | STR_BLC10 | Character | 8 | | |
| ** Total ** | | | 95 | | |

Structure for database: C:\FOXPRO2\THEISIS\TRVL_MAS.DBF

Number of data records: 152

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | STR_BLC | Character | 8 | | |
| 2 | TRV_INTV | Character | 9 | | |
| 3 | TRV_TIME | Numeric | 5 | 1 | |
| 4 | TRV_FREQ | Numeric | 2 | | |
| 5 | TRV_PROB | Numeric | 5 | 3 | |
| ** Total ** | | | 30 | | |

Structure for database: C:\FOXPRO2\THEISIS\BLCK_TRS.DBF

Number of data records: 14

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | BLC_CODE | Character | 7 | | |
| 2 | BLC_LCTN | Character | 40 | | |
| ** Total ** | | | 48. | | |

Structure for database: C:\FOXPRO2\THEISIS\CUS_TRS.DBF

Number of data records: 0

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | INV_CODE | Character | 6 | | |
| 2 | BLC_CODE | Character | 7 | | |
| ** Total ** | | | 14 | | |

Structure for database: C:\FOXPRO2\THEISIS\INV_TRS.DBF

Number of data records: 35

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | INV_CODE | Character | 6 | | |
| 2 | CUS_CODE | Character | 6 | | |
| 3 | BLC_CODE | Character | 7 | | |
| 4 | INV_PROD1 | Numeric | 4 | | |
| 5 | INV_PROD2 | Numeric | 4 | | |
| 6 | INV_PROD3 | Numeric | 4 | | |
| 7 | INV_PROD4 | Numeric | 4 | | |
| 8 | INV_PROD5 | Numeric | 4 | | |
| 9 | INV_VOLU | Numeric | 6 | 3 | |
| 10 | INV_DATE | Date | 8 | | |
| ** Total ** | | | 54 | | |

Structure for database: C:\FOXPRO2\THEISIS\INVV_TRS.DBF

Number of data records: 6

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | CUS_CODE | Character | 6 | | |
| 2 | BLC_CODE | Character | 7 | | |
| 3 | TTL_VOLU | Numeric | 6 | 2 | |
| ** Total ** | | | 20 | | |

Structure for database: C:\FOXPRO2\THEISIS\LINK_TRS.DBF

Number of data records: 6

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | LNK_TRCK | Character | 2 | | |
| 2 | LNK_FROM | Character | 7 | | |
| 3 | LNK_TO | Character | 7 | | |
| 4 | LNK_FU | Logical | 1 | | |
| 5 | LNK_TU | Logical | 1 | | |
| ** Total ** | | | 19 | | |

Structure for database: C:\FOXPRO2\THEISIS\SAV_TRS.DBF

Number of data records: 90

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | SAV_FROM | Character | 7 | | |
| 2 | SAV_TO | Character | 7 | | |
| 3 | SAV_TIME | Numeric | 7 | 3 | |
| ** Total ** | | | 22 | | |

Structure for database: C:\FOXPRO2\THEISIS\TRAN_TRS.DBF

Number of data records: 104

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | TRA_FROM | Character | 7 | | |
| 2 | TRA_TO | Character | 7 | | |
| 3 | TRA_TIME | Numeric | 7 | 3 | |
| ** Total ** | | | 22 | | |

Structure for database: C:\FOXPRO2\THEISIS\TRVL_TRS.DBF

Number of data records: 35

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | STR_BLK | Character | 8 | | |
| 2 | TRV_TIME | Numeric | 5 | 1 | |
| ** Total ** | | | 14 | | |

Structure for database: C:\FOXPRO2\THEISIS\TSV_TRS.DBF

Number of data records: 0

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | SAV_FROM | Character | 7 | | |
| 2 | SAV_TO | Character | 7 | | |
| 3 | SAV_TIME | Numeric | 7 | 3 | |
| ** Total ** | | | 22 | | |

Structure for database: C:\FOXPRO2\THEISIS\ROUT_REP.DBF

Number of data records: 29

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | ROUT_TRCK | Character | 2 | | |
| 2 | ROUT_INV | Character | 6 | | |
| 3 | ROUT_BLK | Character | 7 | | |
| ** Total ** | | | 16 | | |

Structure for database: C:\FOXPRO2\THEISIS\TIME_REP.DBF

Number of data records: 5

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | TIM_TRCK | Character | 7 | | |
| 2 | TIM_HAND | Numeric | 5 | 2 | |
| 3 | TIM_TRAN | Numeric | 5 | 2 | |
| 4 | TIM_TTL | Numeric | 5 | 2 | |
| 5 | TIM_SCND | Logical | 1 | | |
| ** Total ** | | | 24 | | |

Structure for database: C:\FOXPRO2\THESIS\PROD_TBL.DBF

Number of data records: 2

Date of last update : 11/16/92

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | PROD_TYP | Character | 3 | | |
| 2 | PROD_NAM | Character | 20 | | |
| 3 | PROD_VOL | Numeric | 6 | 3 | |
| ** Total ** | | | 30 | | |

Structure for database: C:\FOXPRO2\THESIS\TRCK_TBL.DBF

Number of data records: 7

Date of last update : 02/01/93

| Field | Field Name | Type | Width | Dec | Index |
|-------------|------------|-----------|-------|-----|-------|
| 1 | TRCK_NUM | Character | 2 | | |
| 2 | TRCK_REG | Character | 7 | | |
| 3 | TRCK_LVOL | Numeric | 6 | 3 | |
| 4 | TRCK_HVOL | Numeric | 6 | 3 | |
| ** Total ** | | | 22 | | |

ภาคผนวก ค

ฐานข้อมูล Travelling Path [LINK_MAS]

From block code: SUN1500 To block code: LAD1204
 First: SSUN1501 Next: SPRA1501 Next: SKLO1501 Next: SRAM1201
 Next: SRAM1202 Next: SSRI1201

From block code: SUN1500 To block code: HAP1201
 First: SSUN1501 Next: SPRA1501 Next: SKLO1501 Next: SRAM1201
 Next: SRAM1202 Next: SSRI1201

From block code: SUN1500 To block code: SUK1201
 First: SSUN1501 Next: SPRA1501 Next: SKLO1501 Next: SRAM1201
 Next: SRAM1202 Next: SSRI1201 Next: SLAD1201

From block code: SUN1500 To block code: RAM1201
 First: SSUN1501 Next: SPRA1501 Next: SKLO1501 Next: SRAM1201

From block code: SUN1500 To block code: PAT1301
 First: SSUN1501 Next: SPRA1501 Next: SKLO1501 Next: SPAT1201

From block code: SUN1500 To block code: ONN1301
 First: SSUN1501 Next: SPRA1501 Next: SSKH1401

From block code: SUN1500 To block code: ONN1302
 First: SSUN1501 Next: SPRA1501 Next: SSKH1401 Next: SONN1301

From block code: SUN1500 To block code: SRI1301
 First: SSUN1501 Next: SPRA1501 Next: SSKH1401 Next: SONN1301

From block code: SUN1500 To block code: SRI1302
 First: SSUN1501 Next: SPRA1501 Next: SSKH1401 Next: SONN1301

From block code: SUN1500 To block code: UDO1301
 First: SSUN1501 Next: SPRA1501 Next: SSKH1401 Next: SSKH1402
 Next: SUDO1401 Next: SUDO1301

From block code: SUN1500 To block code: SKH1401
 First: SSUN1501 Next: SPRA1501 Next: SSKH1401

From block code: SUN1500 To block code: SKH1402
 First: SSUN1501 Next: SRAN1501 Next: SSAM1401

From block code: SUN1500 To block code: UD01401
 First: SSUN1501 Next: SRAN1501 Next: SSAM1401 Next: SSKH1403

From block code: SUN1500 To block code: SAM1401
 First: SSUN1501 Next: SRAN1501

From block code: SUN1500 To block code: BAN1401
 First: SSUN1501 Next: SRAN1501 Next: SSAM1401

From block code: SUN1500 To block code: BAN1402
 First: SSUN1501 Next: SRAN1501 Next: SSAM1401 Next: SBAN1401

From block code: SUN1500 To block code: SKH1501
 First: SSUN1501 Next: SRAC1501

From block code: SUN1500 To block code: SKH1502
 First: SSUN1501 Next: SRAC1501

From block code: SUN1500 To block code: SKH1503
 First: SSUN1501 Next: SRAC1501 Next: SSKH1501

From block code: SUN1500 To block code: SKH1504
 First: SSUN1501 Next: SRAC1501 Next: SSKH1501 Next: SSKH1502

From block code: SUN1500 To block code: SKH1505
 First: SSUN1501 Next: SPRA1501

From block code: SUN1500 To block code: KLO1501
 First: SSUN1501 Next: SPRA1501 Next: SSKH1504

From block code: SUN1500 To block code: PRA1501
 First: SSUN1501

From block code: SUN1500 To block code: SUN1501
 First: CLOSELY

From block code: LAD1204 To block code: HAP1201
 First: CLOSELY

From block code: LAD1204 To block code: SUK1201
 First: SLAD1201

From block code: LAD1204 To block code: RAM1201
 First: SSRI1201 Next: SRAM1202

From block code: LAD1204 To block code: PAT1301
 First: SSRI1201 Next: SSRI1202

From block code: LAD1204 To block code: ONN1301
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301

From block code: LAD1204 To block code: ONN1302
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301

From block code: LAD1204 To block code: SRI1301
 First: SSRI1201 Next: SSRI1202

From block code: LAD1204 To block code: SRI1302
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301

From block code: LAD1204 To block code: UD01301
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SUD01301



From block code: LAD1204 To block code: SKH1401
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SONN1301

From block code: LAD1204 To block code: SKH1402
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SONN1301
 Next: SSKH1402

From block code: LAD1204 To block code: UDO1401
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302

From block code: LAD1204 To block code: SAM1401
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SBAN1401 Next: SSAM1401

From block code: LAD1204 To block code: BAN1401
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303

From block code: LAD1204 To block code: BAN1402
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303

From block code: LAD1204 To block code: SKH1501
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501
 Next: SSKH1504 Next: SSKH1503 Next: SSKH1502
 Next: SSKH1501

From block code: LAD1204 To block code: SKH1502
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501
 Next: SSKH1504 Next: SSKH1503 Next: SSKH1502

From block code: LAD1204 To block code: SKH1503
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501
 Next: SSKH1504 Next: SSKH1503

From block code: LAD1204 To block code: SKH1504
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501
 Next: SSKH1504

From block code: LAD1204 To block code: SKH1505
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501

From block code: LAD1204 To block code: KLO1501
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201

From block code: LAD1204 To block code: PRA1501
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501

From block code: LAD1204 To block code: SUN1501
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501
 Next: SPRA1501

From block code: LAD1204 To block code: SKH5301
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SBAN1401

From block code: LAD1204 To block code: SKH5302
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SBAN1401 Next: SSKH5301
 Next: SSKH5302

From block code: LAD1204 To block code: SKH5303
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SSRI5301 Next: SSRI5302

From block code: LAD1204 To block code: SRI5301
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303

From block code: LAD1204 To block code: TAP5301
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SSRI5301

From block code: LAD1204 To block code: TAP5302
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SSRI5301

From block code: LAD1204 To block code: BAN5401
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SBAN1402

From block code: LAD1204 To block code: PUJ5101
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SBAN1401 Next: SSKH5301
 Next: SPUJ5101

From block code: HAP1201 To block code: SUK1201
 First: SLAD1201

From block code: HAP1201 To block code: RAM1201
 First: SSRI1201 Next: SRAM1202

From block code: HAP1201 To block code: PAT1301
 First: SSRI1201 Next: SSRI1202

From block code: HAP1201 To block code: ONN1301
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301

From block code: HAP1201 To block code: ONN1302
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301

From block code: HAP1201 To block code: SRI1301
 First: SSRI1201 Next: SSRI1202

From block code: HAP1201 To block code: SRI1302
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301

From block code: HAP1201 To block code: UD01301
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SUD01301

From block code: HAP1201 To block code: SKH1401
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SONN1301

From block code: HAP1201 To block code: SKH1402
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SONN1301
 Next: SSKH1402

From block code: HAP1201 To block code: UD01401
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302

From block code: HAP1201 To block code: SAM1401
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SBAN1401 Next: SSAM1401

From block code: HAP1201 To block code: BAN1401
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303

From block code: HAP1201 To block code: BAN1402
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303

From block code: HAP1201 To block code: SKH1501
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501
 Next: SSKH1504 Next: SSKH1503 Next: SSKH1502
 Next: SSKH1501

From block code: HAP1201 To block code: SKH1502
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501
 Next: SSKH1504 Next: SSKH1503 Next: SSKH1502

From block code: HAP1201 To block code: SKH1503
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501
 Next: SSKH1504 Next: SSKH1503

From block code: HAP1201 To block code: SKH1504
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501
 Next: SSKH1504

From block code: HAP1201 To block code: SKH1505
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501

From block code: HAP1201 To block code: KLO1501
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201

From block code: HAP1201 To block code: PRA1501
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501

From block code: HAP1201 To block code: SUN1501
 First: SSRI1201 Next: SRAM1202 Next: SRAM1201 Next: SKL01501
 Next: SPRA1501

From block code: HAP1201 To block code: SKH5301
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SBAN1401

From block code: HAP1201 To block code: SKH5302
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SBAN1401 Next: SSKH5301
 Next: SSKH5302

From block code: HAP1201 To block code: SKH5303
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SSRI5301 Next: SSRI5302

From block code: HAP1201 To block code: SRI5301
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303

From block code: HAP1201 To block code: TAP5301
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SSRI5301

From block code: HAP1201 To block code: TAP5302
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SSRI5301

From block code: HAP1201 To block code: BAN5401
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SBAN1402

From block code: HAP1201 To block code: PUJ5101
 First: SSRI1201 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SBAN1401 Next: SSKH5301
 Next: SPUJ5101

From block code: SUK1201 To block code: RAM1201
 First: SLAD1201 Next: SSRI1201 Next: SRAM1202

From block code: SUK1201 To block code: PAT1301
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202

From block code: SUK1201 To block code: ONN1301
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301

From block code: SUK1201 To block code: ONN1302
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301

From block code: SUK1201 To block code: SRI1301
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202

From block code: SUK1201 To block code: SRI1302
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301

From block code: SUK1201 To block code: UD01301
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SSRI1302 Next: SUD01301

From block code: SUK1201 To block code: SKH1401
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SONN1301

From block code: SUK1201 To block code: SKH1402
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SONN1301 Next: SSKH1402

From block code: SUK1201 To block code: UD01401
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SSRI1302

From block code: SUK1201 To block code: SAM1401
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SSRI1302 Next: SSRI1303 Next: SBAN1401
 Next: SSAM1401

From block code: SUK1201 To block code: BAN1401
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SSRI1302 Next: SSRI1303

From block code: SUK1201 To block code: BAN1402
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SSRI1302 Next: SSRI1303

From block code: SUK1201 To block code: SKH1501
 First: SLAD1201 Next: SSRI1201 Next: SRAM1202 Next: SRAM1201
 Next: SKLO1501 Next: SSKH1504 Next: SSKH1503
 Next: SSKH1502 Next: SSKH1501

From block code: SUK1201 To block code: SKH1502
 First: SLAD1201 Next: SSRI1201 Next: SRAM1202 Next: SRAM1201
 Next: SKLO1501 Next: SSKH1504 Next: SSKH1503
 Next: SSKH1502

From block code: SUK1201 To block code: SKH1503
 First: SLAD1201 Next: SSRI1201 Next: SRAM1202 Next: SRAM1201
 Next: SKLO1501 Next: SSKH1504 Next: SSKH1503

From block code: SUK1201 To block code: SKH1504
 First: SLAD1201 Next: SSRI1201 Next: SRAM1202 Next: SRAM1201
 Next: SKLO1501 Next: SSKH1504

From block code: SUK1201 To block code: SKH1505
 First: SLAD1201 Next: SSRI1201 Next: SRAM1202 Next: SRAM1201
 Next: SKLO1501

From block code: SUK1201 To block code: KLO1501
 First: SLAD1201 Next: SSRI1201 Next: SRAM1202 Next: SRAM1201

From block code: SUK1201 To block code: PRA1501
 First: SLAD1201 Next: SSRI1201 Next: SRAM1202 Next: SRAM1201
 Next: SKLO1501

From block code: SUK1201 To block code: SUN1501
 First: SLAD1201 Next: SSRI1201 Next: SRAM1202 Next: SRAM1201
 Next: SKLO1501 Next: SPRA1501

From block code: SUK1201 To block code: SKH5301
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SSRI1302 Next: SSRI1303 Next: SKLO1501

From block code: SUK1201 To block code: SKH5302
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SSRI1302 Next: SSRI1303 Next: SKLO1501
 Next: SSKH5301 Next: SSKH5302

From block code: SUK1201 To block code: SKH5303
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SSRI1302 Next: SSRI1303 Next: SSRI5301
 Next: SSRI5302

From block code: SUK1201 To block code: SRI5301
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SSRI1302 Next: SSRI1303

From block code: SUK1201 To block code: TAP5301
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SSRI1302 Next: SSRI1303 Next: SSRI5301

From block code: SUK1201 To block code: TAP5302
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SSRI1302 Next: SSRI1303 Next: SSRI5301

From block code: SUK1201 To block code: BAN5401
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SSRI1302 Next: SSRI1303 Next: SBAN1402

From block code: SUK1201 To block code: PUJ5101
 First: SLAD1201 Next: SSRI1201 Next: SSRI1202 Next: SSRI1301
 Next: SSRI1302 Next: SSRI1303 Next: SBAN1401
 Next: SSKH5301 Next: SPUJ5101

From block code: RAM1201 To block code: PAT1301
 First: SRAM1202 Next: SSRI1202

From block code: RAM1201 To block code: ONN1301
 First: SRAM1202 Next: SSRI1202 Next: SSRI1301

From block code: RAM1201 To block code: ONN1302
 First: SRAM1202 Next: SSRI1202 Next: SSRI1301

From block code: RAM1201 To block code: SRI1301
 First: SRAM1202 Next: SSRI1202

From block code: RAM1201 To block code: SRI1302
 First: SRAM1202 Next: SSRI1202 Next: SSRI1301

From block code: RAM1201 To block code: UD01301
 First: SRAM1202 Next: SSRI1202 Next: SSRI1301 Next: SUDO1301

From block code: RAM1201 To block code: SKH1401
 First: SRAM1201 Next: SKL01501 Next: SSKH1401

From block code: RAM1201 To block code: SKH1402
 First: SRAM1201 Next: SKL01501 Next: SSKH1401 Next: SSKH1402

From block code: RAM1201 To block code: UD01401
 First: SRAM1201 Next: SKL01501 Next: SSKH1401 Next: SSKH1402

From block code: RAM1201 To block code: SAM1401
 First: SRAM1201 Next: SKL01501 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SSAM1401

From block code: RAM1201 To block code: BAN1401
 First: SRAM1201 Next: SKL01501 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403

From block code: RAM1201 To block code: BAN1402
 First: SRAM1201 Next: SKL01501 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SBAN1401

From block code: RAM1201 To block code: SKH1501
 First: SRAM1201 Next: SKL01501 Next: SSKH1504 Next: SSKH1503
 Next: SSKH1502 Next: SSKH1501

From block code: RAM1201 To block code: SKH1502
 First: SRAM1201 Next: SKL01501 Next: SSKH1504 Next: SSKH1503
 Next: SSKH1502

From block code: RAM1201 To block code: SKH1503
 First: SRAM1201 Next: SKL01501 Next: SSKH1504 Next: SSKH1503

From block code: RAM1201 To block code: SKH1504
 First: SRAM1201 Next: SKL01501 Next: SSKH1504

From block code: RAM1201 To block code: SKH1505
 First: SRAM1201 Next: SKL01501

From block code: RAM1201 To block code: KL01501
 First: SRAM1201

From block code: RAM1201 To block code: PRA1501
 First: SRAM1201 Next: SKLO1501

From block code: RAM1201 To block code: SUN1501
 First: SRAM1201 Next: SKLO1501 Next: SPRA1501

From block code: RAM1201 To block code: SKH5301
 First: SRAM1201 Next: SKLO1501 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403

From block code: RAM1201 To block code: SKH5302
 First: SRAM1201 Next: SKLO1501 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SSKH5301 Next: SSKH5302

From block code: RAM1201 To block code: SKH5303
 First: SRAM1201 Next: SKLO1501 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SSKH5301 Next: SSKH5302
 Next: SSKH5303

From block code: RAM1201 To block code: SRI5301
 First: SRAM1201 Next: SKLO1501 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SSKH5301 Next: STAP5301

From block code: RAM1201 To block code: TAP5301
 First: SRAM1201 Next: SKLO1501 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SSKH5301

From block code: RAM1201 To block code: TAP5302
 First: SRAM1201 Next: SKLO1501 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SSKH5301 Next: STAP5301

From block code: RAM1201 To block code: BAN5401
 First: SRAM1202 Next: SSRI1202 Next: SSRI1301 Next: SSRI1302
 Next: SSRI1303 Next: SBAN1402

From block code: RAM1201 To block code: PUJ5101
 First: SRAM1201 Next: SKLO1501 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SSKH5301 Next: SPUJ5101

From block code: PAT1301 To block code: ONN1301
 First: SSRI1301

From block code: PAT1301 To block code: ONN1302
 First: SSRI1301

From block code: PAT1301 To block code: SRI1301
 First: CLOSELY

From block code: PAT1301 To block code: SRI1302
 First: SSRI1301

From block code: PAT1301 To block code: UDO1301
 First: SSRI1301 Next: SSRI1302 Next: SUDO1301

From block code: PAT1301 To block code: SKH1401
 First: SSRI1301 Next: SSRI1302 Next: SUDO1401

From block code: PAT1301 To block code: SKH1402
 First: SSRI1301 Next: SSRI1302 Next: SUDO1401

From block code: PAT1301 To block code: UDO1401
 First: SSRI1301 Next: SSRI1302

From block code: PAT1301 To block code: SAM1401
 First: SSRI1301 Next: SSRI1302 Next: SSRI1303 Next: SBAN1401
 Next: SSAM1401

From block code: PAT1301 To block code: BAN1401
 First: SSRI1301 Next: SSRI1302 Next: SSRI1303

From block code: PAT1301 To block code: BAN1402
 First: SSRI1301 Next: SSRI1302 Next: SSRI1303

From block code: PAT1301 To block code: SKH1501
 First: SPAT1201 Next: SKLO1501 Next: SSKH1504 Next: SSKH1503
 Next: SSKH1502 Next: SSKH1501

From block code: PAT1301 To block code: SKH1502
 First: SPAT1201 Next: SKLO1501 Next: SSKH1504 Next: SSKH1503
 Next: SSKH1502

From block code: PAT1301 To block code: SKH1503
 First: SPAT1201 Next: SKLO1501 Next: SSKH1504 Next: SSKH1503

From block code: PAT1301 To block code: SKH1504
 First: SPAT1201 Next: SKLO1501 Next: SSKH1504

From block code: PAT1301 To block code: SKH1505
 First: SPAT1201 Next: SKLO1501

From block code: PAT1301 To block code: KLO1501
 First: SPAT1201

From block code: PAT1301 To block code: PRA1501
 First: SPAT1201 Next: SKLO1501

From block code: PAT1301 To block code: SUN1501
 First: SPAT1201 Next: SKLO1501 Next: SPRA1501

From block code: PAT1301 To block code: SKH5301
 First: SSRI1301 Next: SSRI1302 Next: SSRI1303 Next: SSRI5301
 Next: STAP5301

From block code: PAT1301 To block code: SKH5302
 First: SSRI1301 Next: SSRI1302 Next: SSRI1303 Next: SSRI5301
 Next: STAP5301 Next: SSKH5302

From block code: PAT1301 To block code: SKH5303
 First: SSRI1301 Next: SSRI1302 Next: SSRI1303 Next: SSRI5301
 Next: SSRI5302

From block code: PAT1301 To block code: SRI5301
 First: SSRI1301 Next: SSRI1302 Next: SSRI1303

From block code: PAT1301 To block code: TAP5302
 First: SSRI1301 Next: SSRI1302 Next: SSRI1303 Next: SSRI5301

From block code: PAT1301 To block code: BAN5401
 First: SSRI1301 Next: SSRI1302 Next: SSRI1303 Next: SBAN1402

From block code: PAT1301 To block code: PUJ5101
 First: SSRI1301 Next: SSRI1302 Next: SSRI1303 Next: SSRI5301
 Next: STAP5301 Next: SPUJ5101

From block code: ONN1301 To block code: ONN1302
 First: CLOSELY

From block code: ONN1301 To block code: SRI1301
 First: CLOSELY

From block code: ONN1301 To block code: SRI1302
 First: SSRI1302 Next: SUDO1301

From block code: ONN1301 To block code: UD01301
 First: SSRI1302 Next: SUDO1401

From block code: ONN1301 To block code: SKH1401
 First: SSRI1302 Next: SUDO1401

From block code: ONN1301 To block code: SKH1402
 First: SSRI1302 Next: SUDO1401

From block code: ONN1301 To block code: UD01401
 First: SSRI1302

From block code: ONN1301 To block code: SAM1401
 First: SSRI1302 Next: SSRI1303 Next: SBAN1401 Next: SSAM1401

From block code: ONN1301 To block code: BAN1401
 First: SSRI1302 Next: SSRI1303

From block code: ONN1301 To block code: BAN1402
 First: SSRI1302 Next: SSRI1303

From block code: ONN1301 To block code: SKH1501
 First: SSKH1401 Next: SSKH1504 Next: SSKH1503 Next: SSKH1502
 Next: SSKH1501

From block code: ONN1301 To block code: SKH1502
 First: SSKH1401 Next: SSKH1504 Next: SSKH1503 Next: SSKH1502

From block code: ONN1301 To block code: SKH1503
 First: SSKH1401 Next: SSKH1504 Next: SSKH1503



From block code: ONN1301 To block code: SKH1504
First: SSKH1401 Next: SSKH1504

From block code: ONN1301 To block code: SKH1505
First: SSKH1401

From block code: ONN1301 To block code: KLO1501
First: SSKH1401

From block code: ONN1301 To block code: PRA1501
First: SSKH1401

From block code: ONN1301 To block code: SUN1501
First: SSKH1401 Next: SPRA1501

From block code: ONN1301 To block code: SKH5301
First: SSRI1302 Next: SSRI1303 Next: SSRI5301 Next: STAP5301

From block code: ONN1301 To block code: SKH5302
First: SSRI1302 Next: SSRI1303 Next: SSRI5301 Next: STAP5301
Next: SSKH5302

From block code: ONN1301 To block code: SKH5303
First: SSRI1302 Next: SSRI1303 Next: SSRI5301 Next: SSRI5302

From block code: ONN1301 To block code: SRI5301
First: SSRI1302 Next: SSRI1303

From block code: ONN1301 To block code: TAP5301
First: SSRI1302 Next: SSRI1303 Next: SSRI5301

From block code: ONN1301 To block code: TAP5302
First: SSRI1302 Next: SSRI1303 Next: SSRI5301

From block code: ONN1301 To block code: BAN5401
First: SSRI1302 Next: SSRI1303 Next: SBAN1402

From block code: ONN1301 To block code: PUJ5101
First: SSRI1302 Next: SSRI1303 Next: SSRI5301 Next: STAP5301
Next: SPUJ5101

From block code: ONN1302 To block code: SRI1301
First: CLOSELY

From block code: ONN1302 To block code: SRI1302
First: CLOSELY

From block code: ONN1302 To block code: UD01301
First: SSRI1302 Next: SUD01301

From block code: ONN1302 To block code: SKH1401
First: SSRI1302 Next: SUD01401

From block code: ONN1302 To block code: SKH1402
First: SSRI1302 Next: SUD01401

From block code: ONN1302 To block code: UD01401
First: SSRI1302

From block code: ONN1302 To block code: SAM1401
First: SSRI1302 Next: SSRI1303 Next: SBAN1401 Next: SSAM1401

From block code: ONN1302 To block code: BAN1401
First: SSRI1302 Next: SSRI1303

From block code: ONN1302 To block code: BAN1402
First: SSRI1302 Next: SSRI1303

From block code: ONN1302 To block code: SKH1501
First: SONN1301 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503
Next: SSKH1502 Next: SSKH1501

From block code: ONN1302 To block code: SKH1502
First: SONN1301 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503
Next: SSKH1502

From block code: ONN1302 To block code: SKH1503
First: SONN1301 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503

From block code: ONN1302 To block code: SKH1504
First: SONN1301 Next: SSKH1401 Next: SSKH1504

From block code: ONN1302 To block code: SKH1505
First: SONN1301 Next: SSKH1401

From block code: ONN1302 To block code: KL01501
First: SONN1301 Next: SSKH1401

From block code: ONN1302 To block code: PRA1501
First: SONN1301 Next: SSKH1401

From block code: ONN1302 To block code: SUN1501
First: SONN1301 Next: SSKH1401 Next: SPRA1501

From block code: ONN1302 To block code: SKH5301
First: SSRI1302 Next: SSRI1303 Next: SSRI5301 Next: STAP5301

From block code: ONN1302 To block code: SKH5302
First: SSRI1302 Next: SSRI1303 Next: SSRI5301 Next: STAP5301
Next: SSKH5302

From block code: ONN1302 To block code: SKH5303
First: SSRI1302 Next: SSRI1303 Next: SSRI5301 Next: SSRI5302

From block code: ONN1302 To block code: SRI5301
First: SSRI1302 Next: SSRI1303

From block code: ONN1302 To block code: TAP5301
First: SSRI1302 Next: SSRI1303 Next: SSRI5301

From block code: ONN1302 To block code: TAP5302
First: SSRI1302 Next: SSRI1303 Next: SSRI5301

From block code: ONN1302 To block code: BAN5401
First: SSRI1302 Next: SSRI1303 Next: SBAN1402

From block code: ONN1302 To block code: PUJ5101
First: SSRI1302 Next: SSRI1303 Next: SSRI5301 Next: STAP5301
Next: SPUJ5101

From block code: SRI1301 To block code: SRI1302
First: CLOSELY

From block code: SRI1301 To block code: UD01301
First: SSRI1302 Next: SUD01301

From block code: SRI1301 To block code: SKH1401
First: SSRI1302 Next: SUD01401

From block code: SRI1301 To block code: SKH1402
First: SSRI1302 Next: SUD01401

From block code: SRI1301 To block code: UD01401
First: SSRI1302

From block code: SRI1301 To block code: SAM1401
First: SSRI1302 Next: SSRI1303 Next: SBAN1401 Next: SSAM1401

From block code: SRI1301 To block code: BAN1401
First: SSRI1302 Next: SSRI1303

From block code: SRI1301 To block code: BAN1402
First: SSRI1302 Next: SSRI1303

From block code: SRI1301 To block code: SKH1501
First: SONN1301 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503
Next: SSKH1502 Next: SSKH1501

From block code: SRI1301 To block code: SKH1502
First: SONN1301 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503
Next: SSKH1502

From block code: SRI1301 To block code: SKH1503
First: SONN1301 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503

From block code: SRI1301 To block code: SKH1504
First: SONN1301 Next: SSKH1401 Next: SSKH1504

From block code: SRI1301 To block code: SKH1505
First: SONN1301 Next: SSKH1401

From block code: SRI1301 To block code: KL01501
First: SONN1301 Next: SSKH1401

From block code: SRI1301 To block code: PRA1501
First: SONN1301 Next: SSKH1401

From block code: SRI1301 To block code: SUN1501
First: SONN1301 Next: SSKH1401 Next: SPRA1501

From block code: SRI1301 To block code: SKH5301
First: SSRI1302 Next: SSRI1303 Next: SSRI5301 Next: STAP5301

From block code: SRI1301 To block code: SKH5302
First: SSRI1302 Next: SSRI1303 Next: SSRI5301 Next: STAP5301
Next: SSKH5302

From block code: SRI1301 To block code: SKH5303
First: SSRI1302 Next: SSRI1303 Next: SSRI5301 Next: SSRI5302

From block code: SRI1301 To block code: SRI5301
First: SSRI1302 Next: SSRI1303

From block code: SRI1301 To block code: TAP5301
First: SSRI1302 Next: SSRI1303 Next: SSRI5301

From block code: SRI1301 To block code: TAP5302
First: SSRI1302 Next: SSRI1303 Next: SSRI5301

From block code: SRI1301 To block code: BAN5401
First: SSRI1302 Next: SSRI1303 Next: SBAN1402

From block code: SRI1301 To block code: PUJ5101
First: SSRI1302 Next: SSRI1303 Next: SSRI5301 Next: STAP5301
Next: SPUJ5101

From block code: SRI1302 To block code: UD01301
First: SUD01301

From block code: SRI1302 To block code: SKH1401
First: SUD01401

From block code: SRI1302 To block code: SKH1402
First: SUD01401

From block code: SRI1302 To block code: UD01401
First: CLOSELY

From block code: SRI1302 To block code: SAM1401
First: SSRI1303 Next: SBAN1401 Next: SSAM1401

From block code: SRI1302 To block code: BAN1401
First: SSRI1303

From block code: SRI1302 To block code: BAN1402
First: SSRI1303

From block code: SRI1302 To block code: SKH1501
First: SONN1301 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503
Next: SSKH1502 Next: SSKH1501

From block code: SRI1302 To block code: SKH1502
First: SONN1301 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503
Next: SSKH1502

From block code: SRI1302 To block code: SKH1503
First: SONN1301 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503

From block code: SRI1302 To block code: SKH1504
First: SONN1301 Next: SSKH1401 Next: SSKH1504

From block code: SRI1302 To block code: SKH1505
First: SONN1301 Next: SSKH1401

From block code: SRI1302 To block code: KLO1501
First: SONN1301 Next: SSKH1401

From block code: SRI1302 To block code: PRA1501
First: SONN1301 Next: SSKH1401

From block code: SRI1302 To block code: SUN1501
First: SONN1301 Next: SSKH1401 Next: SPRA1501

From block code: SRI1302 To block code: SKH5301
First: SSRI1303 Next: SSRI5301 Next: STAP5301

From block code: SRI1302 To block code: SKH5302
First: SSRI1303 Next: SSRI5301 Next: STAP5301 Next: SSKH5302

From block code: SRI1302 To block code: SKH5303
First: SSRI1303 Next: SSRI5301 Next: SSRI5302

From block code: SRI1302 To block code: SRI5301
First: SSRI1303

From block code: SRI1302 To block code: TAP5301
First: SSRI1303 Next: SSRI5301

From block code: SRI1302 To block code: TAP5302
First: SSRI1303 Next: SSRI5301

From block code: SRI1302 To block code: BAN5401
First: SSRI1303 Next: SBAN1402

From block code: SRI1302 To block code: PUJ5101
First: SSRI1303 Next: SSRI5301 Next: STAP5301 Next: SPUJ5101

From block code: UDO1301 To block code: SKH1401
First: SUDO1301 Next: SUDO1401

From block code: UD01301 To block code: SKH1402
First: SUD01301 Next: SUD01401

From block code: UD01301 To block code: UD01401
First: SUD01301

From block code: UD01301 To block code: SAM1401
First: SUD01301 Next: SSRI1303 Next: SBAN1401 Next: SSAM1401

From block code: UD01301 To block code: BAN1401
First: SUD01301 Next: SSRI1303

From block code: UD01301 To block code: BAN1402
First: SUD01301 Next: SSRI1303

From block code: UD01301 To block code: SKH1501
First: SUD01301 Next: SUD01401 Next: SSKH1402 Next: SSKH1401
Next: SSKH1504 Next: SSKH1503 Next: SSKH1502
Next: SSKH1501

From block code: UD01301 To block code: SKH1502
First: SUD01301 Next: SUD01401 Next: SSKH1402 Next: SSKH1401
Next: SSKH1504 Next: SSKH1503 Next: SSKH1502

From block code: UD01301 To block code: SKH1503
First: SUD01301 Next: SUD01401 Next: SSKH1402 Next: SSKH1401
Next: SSKH1504 Next: SSKH1503

From block code: UD01301 To block code: SKH1504
First: SUD01301 Next: SUD01401 Next: SSKH1402 Next: SSKH1401
Next: SSKH1504

From block code: UD01301 To block code: SKH1505
First: SUD01301 Next: SUD01401 Next: SSKH1402 Next: SSKH1401

From block code: UD01301 To block code: KLO1501
First: SUD01301 Next: SUD01401 Next: SSKH1402 Next: SSKH1401

From block code: UD01301 To block code: PRA1501
First: SUD01301 Next: SUD01401 Next: SSKH1402 Next: SSKH1401

From block code: UD01301 To block code: SUN1501
First: SUD01301 Next: SUD01401 Next: SSKH1402 Next: SSKH1401
Next: SPRA1501

From block code: UD01301 To block code: SKH5301
First: SUD01301 Next: SSRI1303 Next: SSRI5301 Next: STAP5301

From block code: UD01301 To block code: SKH5302
First: SUD01301 Next: SSRI1303 Next: SSRI5301 Next: STAP5301
Next: SSKH5302

From block code: UD01301 To block code: SKH5303
 First: SUD01301 Next: SSRI1303 Next: SSRI5301 Next: SSRI5302

From block code: UD01301 To block code: SRI5301
 First: SUD01301 Next: SSRI1303

From block code: UD01301 To block code: TAP5301
 First: SUD01301 Next: SSRI1303 Next: SSRI5301

From block code: UD01301 To block code: TAP5302
 First: SUD01301 Next: SSRI1303 Next: SSRI5301

From block code: UD01301 To block code: BAN5401
 First: SUD01301 Next: SSRI1303 Next: SBAN1402

From block code: UD01301 To block code: PUJ5101
 First: SUD01301 Next: SSRI1303 Next: SSRI5301 Next: STAP5301
 Next: SPUJ5101

From block code: SKH1401 To block code: SKH1402
 First: CLOSELY

From block code: SKH1401 To block code: UD01401
 First: CLOSELY

From block code: SKH1401 To block code: SAM1401
 First: SSKH1403 Next: SSAM1401

From block code: SKH1401 To block code: BAN1401
 First: SSKH1403

From block code: SKH1401 To block code: BAN1402
 First: SSKH1403 Next: SBAN1401

From block code: SKH1401 To block code: SKH1501
 First: SSKH1401 Next: SSKH1504 Next: SSKH1503 Next: SSKH1502
 Next: SSKH1501

From block code: SKH1401 To block code: SKH1502
 First: SSKH1401 Next: SSKH1504 Next: SSKH1503 Next: SSKH1502

From block code: SKH1401 To block code: SKH1503
 First: SSKH1401 Next: SSKH1504 Next: SSKH1503

From block code: SKH1401 To block code: SKH1504
 First: SSKH1401 Next: SSKH1504

From block code: SKH1401 To block code: SKH1505
 First: SSKH1401

From block code: SKH1401 To block code: KL01501
 First: SSKH1401

From block code: SKH1401 To block code: PRA1501
 First: SSKH1401

From block code: SKH1401 To block code: SUN1501
 First: SSKH1401 Next: SPRA1501

From block code: SKH1401 To block code: SKH5301
 First: SSKH1403

From block code: SKH1401 To block code: SKH5302
 First: SSKH1403 Next: SSKH5301 Next: SSKH5302

From block code: SKH1401 To block code: SKH5303
 First: SSKH1403 Next: SSKH5301 Next: SSKH5302 Next: SSKH5303

From block code: SKH1401 To block code: SRI5301
 First: SSKH1403 Next: SBAN1401

From block code: SKH1401 To block code: TAP5301
 First: SSKH1403 Next: SBAN1401 Next: SSRI5301

From block code: SKH1401 To block code: TAP5302
 First: SSKH1403 Next: SBAN1401 Next: SSRI5301

From block code: SKH1401 To block code: BAN5401
 First: SSKH1403 Next: SBAN1401 Next: SBAN1402

From block code: SKH1401 To block code: PUJ5101
 First: SSKH1403 Next: SSKH5301 Next: SPUJ5101

From block code: SKH1402 To block code: UD01401
 First: CLOSELY

From block code: SKH1402 To block code: SAM1401
 First: SSAM1401

From block code: SKH1402 To block code: BAN1401
 First: CLOSELY

From block code: SKH1402 To block code: BAN1402
 First: SBAN1401

From block code: SKH1402 To block code: SKH1501
 First: SSKH1402 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503
 Next: SSKH1502 Next: SSKH1501

From block code: SKH1402 To block code: SKH1502
 First: SSKH1402 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503
 Next: SSKH1502

From block code: SKH1402 To block code: SKH1503
 First: SSKH1402 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503

From block code: SKH1402 To block code: SKH1504
 First: SSKH1402 Next: SSKH1401 Next: SSKH1504

From block code: SKH1402 To block code: SKH1505
 First: SSKH1402 Next: SSKH1401

From block code: SKH1402 To block code: KLO1501
 First: SSKH1402 Next: SSKH1401

From block code: SKH1402 To block code: PRA1501
 First: SSKH1402 Next: SSKH1401

From block code: SKH1402 To block code: SUN1501
 First: SSKH1402 Next: SSKH1401 Next: SPRA1501

From block code: SKH1402 To block code: SKH5301
 First: CLOSELY

From block code: SKH1402 To block code: SKH5302
 First: SSKH5301 Next: SSKH5302

From block code: SKH1402 To block code: SKH5303
 First: SSKH5301 Next: SSKH5302 Next: SSKH5303

From block code: SKH1402 To block code: SRI5301
 First: SBAN1401

From block code: SKH1402 To block code: TAP5301
 First: SBAN1401 Next: SSRI5301

From block code: SKH1402 To block code: TAP5302
 First: SBAN1401 Next: SSRI5301

From block code: SKH1402 To block code: BAN5401
 First: SBAN1401 Next: SBAN1402

From block code: SKH1402 To block code: PUJ5101
 First: SSKH5301 Next: SPUJ5101

From block code: UD01401 To block code: SAM1401
 First: SSKH1403 Next: SSAM1401

From block code: UD01401 To block code: BAN1401
 First: SSKH1403

From block code: UD01401 To block code: BAN1402
 First: SSRI1303

From block code: UD01401 To block code: SKH1501
 First: SSKH1402 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503
 Next: SSKH1502 Next: SSKH1501

From block code: UD01401 To block code: SKH1502
 First: SSKH1402 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503
 Next: SSKH1502

From block code: UD01401 To block code: SKH1503
 First: SSKH1402 Next: SSKH1401 Next: SSKH1504 Next: SSKH1503

From block code: UD01401 To block code: SKH1504
 First: SSKH1402 Next: SSKH1401 Next: SSKH1504

From block code: UD01401 To block code: SKH1505
First: SSKH1402 Next: SSKH1401

From block code: UD01401 To block code: KL01501
First: SSKH1402 Next: SSKH1401

From block code: UD01401 To block code: PRA1501
First: SSKH1402 Next: SSKH1401

From block code: UD01401 To block code: SUN1501
First: SSKH1402 Next: SSKH1401 Next: SPRA1501

From block code: UD01401 To block code: SKH5301
First: SSKH1403

From block code: UD01401 To block code: SKH5302
First: SSKH1403 Next: SSKH5301 Next: SSKH5302

From block code: UD01401 To block code: SKH5303
First: SSRI1303 Next: SSRI5301 Next: SSRI5302

From block code: UD01401 To block code: SRI5301
First: SSRI1303

From block code: UD01401 To block code: TAP5301
First: SSRI1303 Next: SSRI5301

From block code: UD01401 To block code: TAP5302
First: SSRI1303 Next: SSRI5301

From block code: UD01401 To block code: BAN5401
First: SSRI1303 Next: SBAN1402

From block code: UD01401 To block code: PUJ5101
First: SSKH1403 Next: SSKH5301 Next: SPUJ5101

From block code: SAM1401 To block code: BAN1401
First: SSAM1401

From block code: SAM1401 To block code: BAN1402
First: SSAM1401 Next: SBAN1401

From block code: SAM1401 To block code: SKH1504
First: SSAM1401 Next: SSKH1403 Next: SSKH1402 Next: SSKH1401
Next: SSKH1504

From block code: SAM1401 To block code: SKH1505
First: SSAM1401 Next: SSKH1403 Next: SSKH1402 Next: SSKH1401

From block code: SAM1401 To block code: KL01501
First: SSAM1401 Next: SSKH1403 Next: SSKH1402 Next: SSKH1401

From block code: SAM1401 To block code: PRA1501
First: SRAN1501



From block code: SAM1401 To block code: SUN1501
First: SRAN1501

From block code: SAM1401 To block code: SKH5301
First: SSAM1401

From block code: SAM1401 To block code: SKH5302
First: SSAM1401 Next: SSKH5301 Next: SSKH5302

From block code: SAM1401 To block code: SKH5303
First: SSAM1401 Next: SSKH5301 Next: SSKH5302 Next: SSKH5303

From block code: SAM1401 To block code: SRI5301
First: SSAM1401 Next: SSKH5301 Next: STAP5301

From block code: SAM1401 To block code: TAP5301
First: SSAM1401 Next: SSKH5301

From block code: SAM1401 To block code: TAP5302
First: SSAM1401 Next: SSKH5301 Next: STAP5301

From block code: SAM1401 To block code: BAN5401
First: SSAM1401 Next: SBAN1401 Next: SBAN1402

From block code: SAM1401 To block code: PUJ5101
First: SSAM1401 Next: SSKH5301 Next: SPUJ5101

From block code: BAN1401 To block code: BAN1402
First: CLOSELY

From block code: BAN1401 To block code: SKH1501
First: SSKH1403 Next: SSKH1402 Next: SSKH1401 Next: SSKH1504
Next: SSKH1503 Next: SSKH1502 Next: SSKH1501

From block code: BAN1401 To block code: SKH1502
First: SSKH1403 Next: SSKH1402 Next: SSKH1401 Next: SSKH1504
Next: SSKH1503 Next: SSKH1502

From block code: BAN1401 To block code: SKH1503
First: SSKH1403 Next: SSKH1402 Next: SSKH1401 Next: SSKH1504
Next: SSKH1503

From block code: BAN1401 To block code: SKH1504
First: SSKH1403 Next: SSKH1402 Next: SSKH1401 Next: SSKH1504

From block code: BAN1401 To block code: SKH1505
First: SSKH1403 Next: SSKH1402 Next: SSKH1401

From block code: BAN1401 To block code: KLO1501
First: SSKH1403 Next: SSKH1402 Next: SSKH1401

From block code: BAN1401 To block code: PRA1501
First: SSKH1403 Next: SSKH1402 Next: SSKH1401

From block code: BAN1401 To block code: SUN1501
 First: SSKH1403 Next: SSKH1402 Next: SSKH1401 Next: SPRA1501

From block code: BAN1401 To block code: SKH5301
 First: CLOSELY

From block code: BAN1401 To block code: SKH5302
 First: SSKH5301 Next: SSKH5302

From block code: BAN1401 To block code: SKH5303
 First: SSKH5301 Next: SSKH5302 Next: SSKH5303

From block code: BAN1401 To block code: SRI5301
 First: CLOSELY

From block code: BAN1401 To block code: TAP5301
 First: SSRI5301

From block code: BAN1401 To block code: TAP5302
 First: SSRI5301

From block code: BAN1401 To block code: BAN5401
 First: SBAN1402

From block code: BAN1401 To block code: PUJ5101
 First: SSKH5301 Next: SPUJ5101

From block code: BAN1402 To block code: SKH1501
 First: SBAN1401 Next: SSKH1403 Next: SSKH1402 Next: SSKH1401
 Next: SSKH1504 Next: SSKH1503 Next: SSKH1502
 Next: SSKH1501

From block code: BAN1402 To block code: SKH1502
 First: SBAN1401 Next: SSKH1403 Next: SSKH1402 Next: SSKH1401
 Next: SSKH1504 Next: SSKH1503 Next: SSKH1502

From block code: BAN1402 To block code: SKH1503
 First: SBAN1401 Next: SSKH1403 Next: SSKH1402 Next: SSKH1401
 Next: SSKH1504 Next: SSKH1503

From block code: BAN1402 To block code: SKH1504
 First: SBAN1401 Next: SSKH1403 Next: SSKH1402 Next: SSKH1401
 Next: SSKH1504

From block code: BAN1402 To block code: SKH1505
 First: SBAN1401 Next: SSKH1403 Next: SSKH1402 Next: SSKH1401

From block code: BAN1402 To block code: KL01501
 First: SBAN1401 Next: SSKH1403 Next: SSKH1402 Next: SSKH1401

From block code: BAN1402 To block code: PRA1501
 First: SBAN1401 Next: SSKH1403 Next: SSKH1402 Next: SSKH1401

From block code: BAN1402 To block code: SUN1501
 First: SBAN1401 Next: SSKH1403 Next: SSKH1402 Next: SSKH1401
 Next: SPRA1501

From block code: BAN1402 To block code: SKH5301
 First: SBAN1401

From block code: BAN1402 To block code: SKH5302
 First: SBAN1401 Next: SSKH5301 Next: SSKH5302

From block code: BAN1402 To block code: SKH5303
 First: SSRI5301 Next: SSRI5302

From block code: BAN1402 To block code: SRI5301
 First: CLOSELY

From block code: BAN1402 To block code: TAP5301
 First: SSRI5301

From block code: BAN1402 To block code: TAP5302
 First: SSRI5301

From block code: BAN1402 To block code: BAN5401
 First: CLOSELY

From block code: BAN1402 To block code: PUJ5101
 First: SBAN1401 Next: SSKH5301 Next: SPUJ5101

From block code: SKH1501 To block code: SKH1502
 First: CLOSELY

From block code: SKH1501 To block code: SKH1503
 First: SSKH1501

From block code: SKH1501 To block code: SKH1504
 First: SSKH1501 Next: SSKH1502

From block code: SKH1501 To block code: SKH1505
 First: SSKH1501 Next: SSKH1502 Next: SSKH1503

From block code: SKH1501 To block code: KLO1501
 First: SSKH1501 Next: SSKH1502 Next: SSKH1503 Next: SSKH1504

From block code: SKH1501 To block code: PRA1501
 First: SRAC1501

From block code: SKH1501 To block code: SUN1501
 First: SRAC1501

From block code: SKH1501 To block code: SKH5301
 First: SSKH1501 Next: SSKH1502 Next: SSKH1503 Next: SSKH1504
 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403

From block code: SKH1501 To block code: SKH5302
 First: SSKH1501 Next: SSKH1502 Next: SSKH1503 Next: SSKH1504
 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SSKH5301 Next: SSKH5302

From block code: SKH1501 To block code: SKH5303
 First: SSKH1501 Next: SSKH1502 Next: SSKH1503 Next: SSKH1504
 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SSKH5301 Next: SSKH5302 Next: SSKH5303

From block code: SKH1501 To block code: SRI5301
 First: SSKH1501 Next: SSKH1502 Next: SSKH1503 Next: SSKH1504
 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SBAN1401

From block code: SKH1501 To block code: TAP5301
 First: SSKH1501 Next: SSKH1502 Next: SSKH1503 Next: SSKH1504
 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SBAN1401 Next: SSRI5301

From block code: SKH1501 To block code: TAP5302
 First: SSKH1501 Next: SSKH1502 Next: SSKH1503 Next: SSKH1504
 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SBAN1401 Next: SSRI5301

From block code: SKH1501 To block code: BAN5401
 First: SSKH1501 Next: SSKH1502 Next: SSKH1503 Next: SSKH1504
 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SBAN1401 Next: SBAN1402

From block code: SKH1501 To block code: PUJ5101
 First: SSKH1501 Next: SSKH1502 Next: SSKH1503 Next: SSKH1504
 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SSKH5301 Next: SPUJ5101

From block code: SKH1502 To block code: SKH1503
 First: CLOSELY

From block code: SKH1502 To block code: SKH1504
 First: SSKH1502

From block code: SKH1502 To block code: SKH1505
 First: SSKH1502 Next: SSKH1503

From block code: SKH1502 To block code: KL01501
 First: SSKH1502 Next: SSKH1503 Next: SSKH1504

From block code: SKH1502 To block code: PRA1501
 First: SRAC1501

From block code: SKH1502 To block code: SUN1501
 First: SRAC1501

From block code: SKH1502 To block code: SKH5301
 First: SSKH1502 Next: SSKH1503 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403

From block code: SKH1502 To block code: SKH5302
 First: SSKH1502 Next: SSKH1503 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SSKH5302

From block code: SKH1502 To block code: SKH5303
 First: SSKH1502 Next: SSKH1503 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SSKH5302 Next: SSKH5303

From block code: SKH1502 To block code: SRI5301
 First: SSKH1502 Next: SSKH1503 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401

From block code: SKH1502 To block code: TAP5301
 First: SSKH1502 Next: SSKH1503 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401
 Next: SSRI5301

From block code: SKH1502 To block code: TAP5302
 First: SSKH1502 Next: SSKH1503 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401
 Next: SSRI5301

From block code: SKH1502 To block code: BAN5401
 First: SSKH1502 Next: SSKH1503 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401
 Next: SBAN1402

From block code: SKH1502 To block code: PUJ5101
 First: SSKH1502 Next: SSKH1503 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SPUJ5101

From block code: SKH1503 To block code: SKH1504
 First: CLOSELY

From block code: SKH1503 To block code: SKH1505
 First: SSKH1503

From block code: SKH1503 To block code: KLO1501
 First: SSKH1503 Next: SSKH1504

From block code: SKH1503 To block code: PRA1501
 First: SSKH1501 Next: SRAC1501

From block code: SKH1503 To block code: SUN1501
 First: SSKH1501 Next: SRAC1501

From block code: SKH1503 To block code: SKH5301
 First: SSKH1503 Next: SSKH1504 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403

From block code: SKH1503 To block code: SKH5302
 First: SSKH1503 Next: SSKH1504 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SSKH5301 Next: SSKH5302

From block code: SKH1503 To block code: SKH5303
 First: SSKH1503 Next: SSKH1504 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SSKH5301 Next: SSKH5302
 Next: SSKH5303

From block code: SKH1503 To block code: SRI5301
 First: SSKH1503 Next: SSKH1504 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SBAN1401

From block code: SKH1503 To block code: TAP5301
 First: SSKH1503 Next: SSKH1504 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SBAN1401 Next: SSRI5301

From block code: SKH1503 To block code: TAP5302
 First: SSKH1503 Next: SSKH1504 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SBAN1401 Next: SSRI5301

From block code: SKH1503 To block code: BAN5401
 First: SSKH1503 Next: SSKH1504 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SBAN1401 Next: SBAN1402

From block code: SKH1503 To block code: PUJ5101
 First: SSKH1503 Next: SSKH1504 Next: SSKH1401 Next: SSKH1402
 Next: SSKH1403 Next: SSKH5301 Next: SPUJ5101

From block code: SKH1504 To block code: SKH1505
 First: CLOSELY

From block code: SKH1504 To block code: KLO1501
 First: SSKH1504

From block code: SKH1504 To block code: PRA1501
 First: SSKH1504

From block code: SKH1504 To block code: SUN1501
 First: SSKH1504 Next: SPRA1501

From block code: SKH1504 To block code: SKH5301
 First: SSKH1504 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403

From block code: SKH1504 To block code: SKH5302
 First: SSKH1504 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SSKH5301 Next: SSKH5302

From block code: SKH1504 To block code: SKH5303
 First: SSKH1504 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SSKH5301 Next: SSKH5302 Next: SSKH5303

From block code: SKH1504 To block code: SRI5301
 First: SSKH1504 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SBAN1401

From block code: SKH1504 To block code: TAP5301
 First: SSKH1504 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SBAN1401 Next: SSRI5301

From block code: SKH1504 To block code: TAP5302
 First: SSKH1504 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SBAN1401 Next: SSRI5301

From block code: SKH1504 To block code: BAN5401
 First: SSKH1504 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SBAN1401 Next: SBAN1402

From block code: SKH1504 To block code: PUJ5101
 First: SSKH1504 Next: SSKH1401 Next: SSKH1402 Next: SSKH1403
 Next: SSKH5301 Next: SPUJ5101

From block code: SKH1505 To block code: KLO1501
 First: CLOSELY

From block code: SKH1505 To block code: PRA1501
 First: CLOSELY

From block code: SKH1505 To block code: SUN1501
 First: SPRA1501

From block code: SKH1505 To block code: SKH5301
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403

From block code: SKH1505 To block code: SKH5302
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SSKH5302

From block code: SKH1505 To block code: SKH5303
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SSKH5302 Next: SSKH5303

From block code: SKH1505 To block code: SRI5301
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401

From block code: SKH1505 To block code: PUJ5101
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SPUJ5101

From block code: SKH1505 To block code: BAN5401
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401
 Next: SBAN1402

From block code: SKH1505 To block code: TAP5301
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401
 Next: SSRI5301

From block code: SKH1505 To block code: TAP5302
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401
 Next: SSRI5301

From block code: KL01501 To block code: PRA1501
 First: SSKH1504

From block code: KL01501 To block code: SUN1501
 First: SSKH1504 Next: SPRA1501

From block code: KL01501 To block code: SKH5301
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403

From block code: KL01501 To block code: SKH5302
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SSKH5302

From block code: KL01501 To block code: SKH5303
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SSKH5302 Next: SSKH5303

From block code: KL01501 To block code: SRI5301
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401

From block code: KL01501 To block code: TAP5301
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401
 Next: SSRI5301

From block code: KL01501 To block code: TAP5302
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401
 Next: SSRI5301

From block code: KL01501 To block code: BAN5401
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401
 Next: SBAN1402

From block code: KL01501 To block code: PUJ5101
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SPUJ5101

From block code: PRA1501 To block code: SUN1501
 First: CLOSELY

From block code: PRA1501 To block code: SKH5301
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403

From block code: PRA1501 To block code: SKH5302
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SSKH5302

From block code: PRA1501 To block code: SKH5303
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SSKH5302 Next: SSKH5303

From block code: PRA1501 To block code: SRI5301
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401

From block code: PRA1501 To block code: TAP5301
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401
 Next: SSRI5301

From block code: PRA1501 To block code: TAP5302
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401
 Next: SSRI5301

From block code: PRA1501 To block code: BAN5401
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401
 Next: SBAN1402

From block code: PRA1501 To block code: PUJ5101
 First: SSKH1401 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SPUJ5101

From block code: SUN1501 To block code: SKH5301
 First: SRAN1501 Next: SSAM1401

From block code: SUN1501 To block code: SKH5302
 First: SRAN1501 Next: SSAM1401 Next: SSKH5301 Next: SSKH5302

From block code: SUN1501 To block code: SKH5303
 First: SRAN1501 Next: SSAM1401 Next: SSKH5301 Next: SSKH5302
 Next: SSKH5303

From block code: SUN1501 To block code: SRI5301
 First: SRAN1501 Next: SSAM1401 Next: SBAN1401

From block code: SUN1501 To block code: TAP5301
 First: SRAN1501 Next: SSAM1401 Next: SSKH5301

From block code: SUN1501 To block code: TAP5302
 First: SRAN1501 Next: SSAM1401 Next: SSKH5301 Next: STAP5301

From block code: SUN1501 To block code: BAN5401
 First: SRAN1501 Next: SSAM1401 Next: SBAN1401 Next: SBAN1402

From block code: SUN1501 To block code: PUJ5101
 First: SRAN1501 Next: SSAM1401 Next: SSKH5301 Next: SPUJ5101

From block code: SKH5301 To block code: SKH5302
 First: SSKH5302

From block code: SKH5301 To block code: SKH5303
First: SSKH5302 Next: SSKH5303

From block code: SKH5301 To block code: SRI5301
First: STAP5301

From block code: SKH5301 To block code: TAP5301
First: CLOSELY

From block code: SKH5301 To block code: TAP5302
First: STAP5301

From block code: SKH5301 To block code: BAN5401
First: SBAN1401 Next: SBAN1402

From block code: SKH5301 To block code: PUJ5101
First: SPUJ5101

From block code: SKH5302 To block code: SKH5303
First: CLOSELY

From block code: SKH5302 To block code: SRI5301
First: SSKH5302 Next: STAP5301

From block code: SKH5302 To block code: TAP5301
First: SSKH5302

From block code: SKH5302 To block code: TAP5302
First: SSKH5302 Next: STAP5301

From block code: SKH5302 To block code: BAN5401
First: SSKH5302 Next: SSKH5301 Next: SBAN1401 Next: SBAN1402

From block code: SKH5302 To block code: PUJ5101
First: SSKH5302 Next: SPUJ5101

From block code: SKH5303 To block code: SRI5301
First: SSRI5302

From block code: SKH5303 To block code: TAP5301
First: SSRI5302

From block code: SKH5303 To block code: TAP5302
First: SSRI5302

From block code: SKH5303 To block code: BAN5401
First: SSRI5302 Next: SSRI5301 Next: SBAN1402

From block code: SKH5303 To block code: PUJ5101
First: SSKH5303 Next: SSKH5302 Next: SPUJ5101

From block code: SRI5301 To block code: TAP5301
First: CLOSELY

From block code: SRI5301 To block code: TAP5302
First: CLOSELY



From block code: SRI5301 To block code: BAN5401
 First: SBAN1402

From block code: SRI5301 To block code: PUJ5101
 First: STAP5301 Next: SPUJ5101

From block code: TAP5301 To block code: TAP5302
 First: CLOSELY

From block code: TAP5301 To block code: BAN5401
 First: SSRI5301 Next: SBAN1402

From block code: TAP5301 To block code: PUJ5101
 First: SPUJ5101

From block code: TAP5302 To block code: BAN5401
 First: SSRI5301 Next: SBAN1402

From block code: TAP5302 To block code: PUJ5101
 First: STAP5301 Next: SPUJ5101

From block code: BAN5401 To block code: PUJ5101
 First: SBAN1402 Next: SSRI5301 Next: STAP5301 Next: SPUJ5101

From block code: SUN1500 To block code: SKH5301
 First: SSUN1501 Next: SPRA1501 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403

From block code: SUN1500 To block code: SKH5302
 First: SSUN1501 Next: SPRA1501 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SSKH5302

From block code: SUN1500 To block code: SKH5303
 First: SSUN1501 Next: SPRA1501 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: SSKH5302 Next: SSKH5303

From block code: SUN1500 To block code: SRI5301
 First: SSUN1501 Next: SPRA1501 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403 Next: SBAN1401

From block code: SUN1500 To block code: TAP5301
 First: SSUN1501 Next: SPRA1501 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301

From block code: SUN1500 To block code: TAP5302
 First: SSUN1501 Next: SPRA1501 Next: SSKH1504 Next: SSKH1401
 Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
 Next: STAP5301

From block code: SUN1500 To block code: BAN5401
First: SSUN1501 Next: SPRA1501 Next: SSKH1504 Next: SSKH1401
Next: SSKH1402 Next: SSKH1403 Next: SBAN1401
Next: SBAN1402

From block code: SUN1500 To block code: PUJ5101
First: SSUN1501 Next: SPRA1501 Next: SSKH1504 Next: SSKH1401
Next: SSKH1402 Next: SSKH1403 Next: SSKH5301
Next: SPUJ5101

From block code: SAM1401 To block code: SKH1501
First: SRAN1501 Next: SRAC1501

From block code: SAM1401 To block code: SKH1502
First: SRAN1501 Next: SRAC1501

From block code: SAM1401 To block code: SKH1503
First: SRAN1501 Next: SRAC1501 Next: SSKH1501

ภาคผนวก ง

ฐานข้อมูล Travelling Time [TRVL_MAS]

| | | | |
|-----------------------------|-----------|------------------|--|
| Street block code: SLAD1201 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 12.0 | 4 | 0.400 | |
| 16.0 | 4 | 0.800 | |
| 20.0 | 2 | 1.000 | |
| Street block code: SRAM1201 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 17.0 | 7 | 0.700 | |
| 21.0 | 2 | 0.900 | |
| 25.0 | 0 | 0.900 | |
| 29.0 | 1 | 1.000 | |
| Street block code: SRAM1202 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 17.0 | 1 | 0.100 | |
| 21.0 | 2 | 0.300 | |
| 25.0 | 4 | 0.700 | |
| 29.0 | 2 | 0.900 | |
| 33.0 | 0 | 0.900 | |
| 37.0 | 0 | 0.900 | |
| 41.0 | 1 | 1.000 | |
| Street block code: SSRI1201 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 12.0 | 1 | 0.100 | |
| 16.0 | 5 | 0.600 | |
| 20.0 | 2 | 0.800 | |
| 24.0 | 1 | 0.900 | |
| 28.0 | 1 | 1.000 | |
| Street block code: SSRI1202 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 17.0 | 4 | 0.400 | |
| 21.0 | 3 | 0.700 | |
| 25.0 | 2 | 0.900 | |
| 29.0 | 1 | 1.000 | |
| Street block code: SPAT1201 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 17.0 | 1 | 0.100 | |
| 21.0 | 2 | 0.300 | |
| 25.0 | 5 | 0.800 | |
| 29.0 | 1 | 0.900 | |
| 33.0 | 0 | 0.900 | |
| 37.0 | 0 | 0.900 | |
| 41.0 | 1 | 1.000 | |

Street block code: SONN1301

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 17.0 | 1 | 0.100 |
| 21.0 | 1 | 0.200 |
| 25.0 | 1 | 0.300 |
| 29.0 | 4 | 0.700 |
| 33.0 | 0 | 0.700 |
| 37.0 | 1 | 0.800 |
| 41.0 | 1 | 0.900 |
| 45.0 | 1 | 1.000 |

Street block code: SSRI1301

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 12.0 | 1 | 0.100 |
| 16.0 | 2 | 0.300 |
| 20.0 | 0 | 0.300 |
| 24.0 | 3 | 0.600 |
| 28.0 | 4 | 1.000 |

Street block code: SSRI1302

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 17.0 | 1 | 0.100 |
| 21.0 | 4 | 0.500 |
| 25.0 | 3 | 0.800 |
| 29.0 | 1 | 0.900 |
| 33.0 | 0 | 0.900 |
| 37.0 | 0 | 0.900 |
| 41.0 | 1 | 1.000 |

Street block code: SSRI1303

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 7.0 | 4 | 0.400 |
| 11.0 | 5 | 0.900 |
| 15.0 | 1 | 1.000 |

Street block code: SUDO1301

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 6.0 | 4 | 0.400 |
| 8.0 | 3 | 0.700 |
| 10.0 | 3 | 1.000 |

Street block code: SSKH1402

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 7.0 | 1 | 0.100 |
| 11.0 | 4 | 0.500 |
| 15.0 | 3 | 0.800 |
| 19.0 | 2 | 1.000 |

Street block code: SSKH1403

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 7.0 | 5 | 0.500 |
| 11.0 | 3 | 0.800 |
| 15.0 | 2 | 1.000 |

Street block code: SUDO1401

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 12.0 | 1 | 0.100 |
| 16.0 | 1 | 0.200 |
| 20.0 | 1 | 0.300 |
| 24.0 | 2 | 0.500 |
| 28.0 | 0 | 0.500 |
| 32.0 | 3 | 0.800 |
| 36.0 | 2 | 1.000 |

Street block code: SSAM1401

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 6.0 | 4 | 0.400 |
| 8.0 | 2 | 0.600 |
| 10.0 | 4 | 1.000 |

Street block code: SBAN1401

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 12.0 | 1 | 0.100 |
| 16.0 | 2 | 0.300 |
| 20.0 | 2 | 0.500 |
| 24.0 | 2 | 0.700 |
| 28.0 | 3 | 1.000 |

Street block code: SBAN1402

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 17.0 | 1 | 0.100 |
| 21.0 | 2 | 0.300 |
| 25.0 | 3 | 0.600 |
| 29.0 | 4 | 1.000 |

Street block code: SSKH1501

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 6.0 | 4 | 0.400 |
| 8.0 | 2 | 0.600 |
| 10.0 | 4 | 1.000 |

Street block code: SSKH1502

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 7.0 | 1 | 0.100 |
| 11.0 | 5 | 0.600 |
| 15.0 | 3 | 0.900 |
| 19.0 | 1 | 1.000 |

Street block code: SSKH1503

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 7.0 | 2 | 0.200 |
| 11.0 | 5 | 0.700 |
| 15.0 | 3 | 1.000 |

Street block code: SSKH1504

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 7.0 | 2 | 0.200 |
| 11.0 | 2 | 0.400 |
| 15.0 | 3 | 0.700 |
| 19.0 | 2 | 0.900 |
| 23.0 | 1 | 1.000 |

| | | | |
|-----------------------------|-----------|------------------|--|
| Street block code: SKL01501 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 12.0 | 1 | 0.100 | |
| 16.0 | 1 | 0.200 | |
| 20.0 | 2 | 0.400 | |
| 24.0 | 1 | 0.500 | |
| 28.0 | 5 | 1.000 | |
| Street block code: SPRA1501 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 12.0 | 1 | 0.100 | |
| 16.0 | 1 | 0.200 | |
| 20.0 | 2 | 0.400 | |
| 24.0 | 2 | 0.600 | |
| 28.0 | 4 | 1.000 | |
| Street block code: SSUN1501 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 6.0 | 4 | 0.400 | |
| 8.0 | 2 | 0.600 | |
| 10.0 | 4 | 1.000 | |
| Street block code: SRAC1501 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 12.0 | 1 | 0.100 | |
| 16.0 | 5 | 0.600 | |
| 20.0 | 3 | 0.900 | |
| 24.0 | 1 | 1.000 | |
| Street block code: SRAN1501 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 29.5 | 4 | 0.400 | |
| 32.5 | 0 | 0.400 | |
| 35.5 | 4 | 0.800 | |
| 38.5 | 2 | 1.000 | |
| Street block code: SSKH5301 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 17.0 | 1 | 0.100 | |
| 21.0 | 2 | 0.300 | |
| 25.0 | 0 | 0.300 | |
| 29.0 | 6 | 0.900 | |
| 33.0 | 1 | 1.000 | |
| Street block code: SSKH5302 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 7.0 | 5 | 0.500 | |
| 11.0 | 3 | 0.800 | |
| 15.0 | 2 | 1.000 | |
| Street block code: SSKH5303 | | | |
| Avg. travelling time | Frequency | Cum. probability | |
| 12.0 | 4 | 0.400 | |
| 16.0 | 3 | 0.700 | |
| 20.0 | 3 | 1.000 | |

Street block code: SSRI5301

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 17.0 | 1 | 0.100 |
| 21.0 | 0 | 0.100 |
| 25.0 | 3 | 0.400 |
| 29.0 | 3 | 0.700 |
| 33.0 | 0 | 0.700 |
| 37.0 | 2 | 0.900 |
| 41.0 | 1 | 1.000 |

Street block code: SSRI5302

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 17.0 | 1 | 0.100 |
| 21.0 | 2 | 0.300 |
| 25.0 | 4 | 0.700 |
| 29.0 | 2 | 0.900 |
| 33.0 | 1 | 1.000 |

Street block code: STAP5301

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 7.0 | 2 | 0.200 |
| 11.0 | 3 | 0.500 |
| 15.0 | 3 | 0.800 |
| 19.0 | 2 | 1.000 |

Street block code: SPUJ5101

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 12.0 | 2 | 0.200 |
| 16.0 | 4 | 0.600 |
| 20.0 | 4 | 1.000 |

Street block code: CLOSELY

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 0.0 | 1 | 1.000 |

Street block code: SSKH1401

| Avg. travelling time | Frequency | Cum. probability |
|----------------------|-----------|------------------|
| 6.0 | 5 | 0.500 |
| 8.0 | 4 | 0.900 |
| 10.0 | 1 | 1.000 |

ภาคผนวก จ

ฐานข้อมูล Block Location [BLCK_MAS]

Block code: LAD1204
Location: LADPRAO Rd. block 4 BANGKAPI

Block code: HAP1201
Location: HAPPYLAND block 1 BANGKAPI

Block code: SUK1201
Location: SUKAPHIBALN Rd. block 1 BANGKAPI

Block code: RAM1201
Location: RAMKAMHANG Rd. block 1 BANGKAPI

Block code: ONN1301
Location: ONNUCH Rd. block 1 PRAWET

Block code: PAT1301
Location: PATTANAKARN Rd. block 1 PRAWET

Block code: ONN1302
Location: ONNUCH Rd. block 2 PRAWET

Block code: SRI1301
Location: SRINAKARIN Rd. block 1 PRAWET

Block code: SRI1302
Location: SRINAKARIN Rd. block 2 PRAWET

Block code: UD01301
Location: UDOMSUK Rd. block 1 PRAWET

Block code: SKH1401
Location: SUKHUMWIT Rd. block 1 PRAKHANONG

Block code: SKH1402
Location: SUKHUMWIT Rd. block 2 PRAKHANONG

Block code: UD01401
Location: UDOMSUK Rd. block 1 PRAKHANONG

Block code: SAM1401
Location: SAMPAWUT Rd. block 1 PRAKHANONG

Block code: BAN1401
Location: BANGNA-TRAD Rd. block 1 PRAKHANONG

Block code: BAN1402
Location: BANGNA-TRAD Rd. block 2 PRAKHANONG

Block code: SKH1501
Location: SUKHUMWIT Rd. block 1 KLONGTOEY

Block code: SKH1502
Location: SUKHUMWIT Rd. block 2 KLONGTOEY

Block code: SKH1503
Location: SUKHUMWIT Rd. block 3 KLONGTOEY



Block code: SKH1504
Location: SUKHUMWIT Rd. block 4 KLONGTOEY

Block code: SKH1505
Location: SUKHUMWIT Rd. block 5 KLONGTOEY

Block code: KLO1501
Location: KLONGTON Rd. block 1 KLONGTOEY

Block code: PRA1501
Location: PHRARAM 4 Rd. block 1 KLONGTOEY

Block code: SUN1501
Location: SUNTORNKOSA Rd. block 1 KLONGTOEY

Block code: SKH5301
Location: SUKHUMWIT Rd. block 1 MEONG SUMUTPRAKRAN

Block code: SKH5302
Location: SUKHUMWIT Rd. block 2 MEONG SUMUTPRAKRAN

Block code: SKH5303
Location: SUKHUMWIT Rd. block 3 MEONG SUMUTPRAKRAN

Block code: SRI5301
Location: SRINAKARIN Rd. block 3 MEONG SUMUT.

Block code: TAP5301
Location: TAPARUK Rd. block 1 MEONG SUMUTPRAKARN

Block code: TAP5302
Location: TAPARUK Rd. block 2 MEONG SUMUTPRAKARN

Block code: BAN5401
Location: BANGNA-TRAD Rd. block 1 BANGPLEE

Block code: PUJ5101
Location: POOJOAW. Rd. block 1 PHRAPRADEANG

ภาคผนวก ฉ

ฐานข้อมูล Customer Data [CUST_MAS]

Customer code: 893602
Name : LAD1204-1S
Address :
Block code: LAD1204
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 893835
Name : LAD1204-2S
Address :
Block code: LAD1204
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 902395
Name : LAD1204-3S
Address :
Block code: LAD1204
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 838502
Name : HAP1201-01C
Address :
Block code: HAP1201
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 832139
Name : HAP1201-02C
Address :
Block code: HAP1201
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 904617
Name : HAP1201-03S
Address :
Block code: HAP1201
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 838518
Name : HAP1201-04C
Address :
Block code: HAP1201
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 835725
Name : HAP1201-05C
Address :
Block code: HAP1201
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 834548
Name : HAP1201-06C
Address :
Block code: HAP1201
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 834878
Name : HAP1201-07C
Address :
Block code: HAP1201
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 901581
Name : SUK1201-01S
Address :
Block code: SUK1201
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 901050
Name : SUK1201-02S
Address :
Block code: SUK1201
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 835301
Name : SUK1201-03C
Address :
Block code: SUK1201
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 837066
Name : SUK1201-04C
Address :
Block code: SUK1201
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 891426
Name : RAM1201-01S
Address :
Block code: RAM1201
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 902500
Name : RAM1201-02S
Address :
Block code: RAM1201
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 890130
Name : RAM1201-03S
Address :
Block code: RAM1201
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 901523
Name : RAM1201-04S
Address :
Block code: RAM1201
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 892661
Name : RAM1201-05S
Address :
Block code: RAM1201
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 892438
Name : RAM1201-06S
Address :
Block code: RAM1201
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 833468
Name : RAM1201-07C
Address :
Block code: RAM1201
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 901277
Name : RAM1201-08S
Address :
Block code: RAM1201
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 893738
Name : RAM1201-09S
Address :
Block code: RAM1201
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 893592
Name : RAM1201-10S
Address :
Block code: RAM1201
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 891374
Name : RAM1201-11S
Address :
Block code: RAM1201
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 898384
Name : PAT1301-01S
Address :
Block code: PAT1301
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 890139
Name : PAT1301-02S
Address :
Block code: PAT1301
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 898388
Name : PAT1301-03S
Address :
Block code: PAT1301
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 904603
Name : PAT1301-04S
Address :
Block code: PAT1301
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 838528
Name : PAT1301-05C
Address :
Block code: PAT1301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 835194
Name : PAT1301-06J
Address :
Block code: PAT1301
Idle time for shipment : 10
Handle time for shipment: 2

Customer code: 838544
Name : PAT1301-07J
Address :
Block code: PAT1301
Idle time for shipment : 10
Handle time for shipment: 2

Customer code: 830843

Name : ONN1301-01C
Address :
Block code: ONN1301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 831376

Name : ONN1301-02C
Address :
Block code: ONN1301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 835505

Name : ONN1301-03C
Address :
Block code: ONN1301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 834823

Name : ONN1301-04C
Address :
Block code: ONN1301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 893686

Name : ONN1302-01S
Address :
Block code: ONN1302
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 892687

Name : ONN1302-02S
Address :
Block code: ONN1302
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 843880

Name : ONN1302-03C
Address :
Block code: ONN1302
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 831378

Name : SRI1301-01C
Address :
Block code: SRI1301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 892674
Name : SRI1302-01S
Address :
Block code: SRI1302
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 833880
Name : UDO1301-01C
Address :
Block code: UDO1301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 831110
Name : SKH1401-01C
Address :
Block code: SKH1401
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 902384
Name : SKH1401-02S
Address :
Block code: SKH1401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 898741
Name : SKH1401-03S
Address :
Block code: SKH1401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 902387
Name : SKH1401-04S
Address :
Block code: SKH1401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 893660
Name : SKH1401-05S
Address :
Block code: SKH1401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 901578
Name : SKH1401-06S
Address :
Block code: SKH1401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 832511
Name : SKH1401-07C
Address :
Block code: SKH1401
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 902438
Name : SKH1401-08S
Address :
Block code: SKH1401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 764059
Name : SKH1401-09S
Address :
Block code: SKH1401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 833866
Name : SKH1402-01C
Address :
Block code: SKH1402
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 833701
Name : SKH1402-02C
Address :
Block code: SKH1402
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 832524
Name : SKH1402-03C
Address :
Block code: SKH1402
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 833882
Name : UD01401-01C
Address :
Block code: UD01401
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 830254
Name : UD01401-02C
Address :
Block code: UD01401
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 833879
 Name : UD01401-03C
 Address :
 Block code: UD01401
 Idle time for shipment : 5
 Handle time for shipment: 5

Customer code: 836960
 Name : UD01401-04C
 Address :
 Block code: UD01401
 Idle time for shipment : 5
 Handle time for shipment: 5

Customer code: 894795
 Name : UD01401-05S
 Address :
 Block code: UD01401
 Idle time for shipment : 10
 Handle time for shipment: 5

Customer code: 833659
 Name : UD01401-06C
 Address :
 Block code: UD01401
 Idle time for shipment : 5
 Handle time for shipment: 5

Customer code: 898755
 Name : UD01401-07S
 Address :
 Block code: UD01401
 Idle time for shipment : 10
 Handle time for shipment: 5

Customer code: 900120
 Name : UD01401-08S
 Address :
 Block code: UD01401
 Idle time for shipment : 10
 Handle time for shipment: 5

Customer code: 901604
 Name : UD01401-09S
 Address :
 Block code: UD01401
 Idle time for shipment : 10
 Handle time for shipment: 5

Customer code: 834357
 Name : UD01401-10C
 Address :
 Block code: UD01401
 Idle time for shipment : 5
 Handle time for shipment: 5



Customer code: 894876

Name : SAM1401-01S
Address :
Block code: SAM1401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 894889

Name : SAM1401-02S
Address :
Block code: SAM1401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 892344

Name : SAM1401-03S
Address :
Block code: SAM1401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 764058

Name : BAN1401-05C
Address :
Block code: BAN1401
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 893819

Name : BAN1401-01S
Address :
Block code: BAN1401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 898706

Name : BAN1401-02S
Address :
Block code: BAN1401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 162236

Name : BAN1401-03C
Address :
Block code: BAN1401
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 902399

Name : BAN1402-01S
Address :
Block code: BAN1402
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 893521
Name : SKH1501-01S
Address :
Block code: SKH1501
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 902010
Name : SKH1501-02S
Address :
Block code: SKH1501
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 836203
Name : SKH1501-03C
Address :
Block code: SKH1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 894782
Name : SKH1502-01S
Address :
Block code: SKH1502
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 890100
Name : SKH1502-02S
Address :
Block code: SKH1502
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 830089
Name : SKH1502-03C
Address :
Block code: SKH1502
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 894614
Name : SKH1502-04S
Address :
Block code: SKH1502
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 836216
Name : SKH1502-05C
Address :
Block code: SKH1502
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 833499
Name : SKH1503-01C
Address :
Block code: SKH1503
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 893657
Name : SKH1503-02S
Address :
Block code: SKH1503
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 894203
Name : SKH1503-03S
Address :
Block code: SKH1503
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 890270
Name : SKH1504-01S
Address :
Block code: SKH1504
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 900919
Name : SKH1504-02S
Address :
Block code: SKH1504
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 834218
Name : SKH1504-03C
Address :
Block code: SKH1504
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 890155
Name : SKH1505-01S
Address :
Block code: SKH1505
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 894517
Name : SKH1505-02S
Address :
Block code: SKH1505
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 890142

Name : SKH1505-03S
Address :
Block code: SKH1505
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 893576

Name : SKH1505-04S
Address :
Block code: SKH1505
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 904604

Name : SKH1505-05S
Address :
Block code: SKH1505
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 902098

Name : SKH1505-06S
Address :
Block code: SKH1505
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 904619

Name : SKH1505-07S
Address :
Block code: SKH1505
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 904602

Name : SKH1505-08S
Address :
Block code: SKH1505
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 831457

Name : SKH1505-09C
Address :
Block code: SKH1505
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 833471

Name : SKH1505-10C
Address :
Block code: SKH1505
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 831981
Name : SKH1505-11C
Address :
Block code: SKH1505
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 833060
Name : SKH1505-12C
Address :
Block code: SKH1505
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 833691
Name : SKH1505-13C
Address :
Block code: SKH1505
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 832058
Name : SKH1505-14C
Address :
Block code: SKH1505
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 835770
Name : SKH1505-15C
Address :
Block code: SKH1505
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 902108
Name : KL01501-01S
Address :
Block code: KL01501
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 902385
Name : KL01501-02S
Address :
Block code: KL01501
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 831391
Name : KL01501-03C
Address :
Block code: KL01501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 837215
Name : KLO1501-04C
Address :
Block code: KLO1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 834577
Name : KLO1501-05C
Address :
Block code: KLO1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 838007
Name : KLO1501-06C
Address :
Block code: KLO1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 838510
Name : KLO1501-07C
Address :
Block code: KLO1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 834289
Name : KLO1501-08C
Address :
Block code: KLO1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 833484
Name : KLO1501-09C
Address :
Block code: KLO1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 835783
Name : ONN1301-01S
Address :
Block code: ONN1301
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 904601
Name : ONN1301-02S
Address :
Block code: ONN1301
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 835507
Name : ONN1301-03C
Address :
Block code: ONN1301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 836944
Name : ONN1301-04C
Address :
Block code: ONN1301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 830128
Name : PRA1501-01C
Address :
Block code: PRA1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 832825
Name : PRA1501-02C
Address :
Block code: PRA1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 894805
Name : PRA1501-03S
Address :
Block code: PRA1501
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 831363
Name : PRA1501-04C
Address :
Block code: PRA1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 834331
Name : PRA1501-05C
Address :
Block code: PRA1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 834328
Name : PRA1501-06C
Address :
Block code: PRA1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 835631
Name : PRA1501-07C
Address :
Block code: PRA1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 831569
Name : PRA1501-08C
Address :
Block code: PRA1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 900320
Name : PRA1501-09S
Address :
Block code: PRA1501
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 833413
Name : PRA1501-10C
Address :
Block code: PRA1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 835179
Name : SUN1501-01C
Address :
Block code: SUN1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 831567
Name : SUN1501-02C
Address :
Block code: SUN1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 831570
Name : SUN1501-03C
Address :
Block code: SUN1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 830364
Name : SUN1501-04C
Address :
Block code: SUN1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 835709
Name : SUN1501-05C
Address :
Block code: SUN1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 831907
Name : SUN1501-06C
Address :
Block code: SUN1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 832537
Name : SUN1501-07C
Address :
Block code: SUN1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 833507
Name : SUN1501-08C
Address :
Block code: SUN1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 833497
Name : SUN1501-09C
Address :
Block code: SUN1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 833646
Name : SUN1501-10C
Address :
Block code: SUN1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 835178
Name : SUN1501-11C
Address :
Block code: SUN1501
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 890993
Name : SKH5301-01S
Address :
Block code: SKH5301
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 902409
 Name : SKH5301-02S
 Address :
 Block code: SKH5301
 Idle time for shipment : 10
 Handle time for shipment: 5

Customer code: 902496
 Name : SKH5301-03S
 Address :
 Block code: SKH5301
 Idle time for shipment : 10
 Handle time for shipment: 5

Customer code: 904624
 Name : SKH5301-04S
 Address :
 Block code: SKH5301
 Idle time for shipment : 10
 Handle time for shipment: 5

Customer code: 904622
 Name : SKH5301-05S
 Address :
 Block code: SKH5301
 Idle time for shipment : 10
 Handle time for shipment: 5

Customer code: 761077
 Name : SKH5301-06S
 Address :
 Block code: SKH5301
 Idle time for shipment : 15
 Handle time for shipment: 3

Customer code: 764087
 Name : SKH5301-07C
 Address :
 Block code: SKH5301
 Idle time for shipment : 5
 Handle time for shipment: 5

Customer code: 764126
 Name : SKH5301-08C
 Address :
 Block code: SKH5301
 Idle time for shipment : 5
 Handle time for shipment: 5

Customer code: 765413
 Name : SKH5301-09C
 Address :
 Block code: SKH5301
 Idle time for shipment : 5
 Handle time for shipment: 5



Customer code: 762940

Name : SKH5301-10C
Address :
Block code: SKH5301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 766320

Name : SKH5301-11C
Address :
Block code: SKH5301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 764016

Name : SKH5301-12C
Address :
Block code: SKH5301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 892250

Name : SKH5302-01S
Address :
Block code: SKH5302
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 902388

Name : SRI5301-01S
Address :
Block code: SRI5301
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 902483

Name : SRI5301-02S
Address :
Block code: SRI5301
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 904620

Name : TAP5301-01S
Address :
Block code: TAP5301
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 761297

Name : TAP5301-02C
Address :
Block code: TAP5301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 761080

Name : TAP5301-03C
Address :
Block code: TAP5301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 902386

Name : TAP5302-01S
Address :
Block code: TAP5302
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 763457

Name : TAP5302-02C
Address :
Block code: TAP5302
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 893880

Name : SKH5303-01S
Address :
Block code: SKH5303
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 761226

Name : SKH5303-02C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 763981

Name : SKH5303-03C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 761239

Name : SKH5303-04C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 761255

Name : SKH5303-05C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 761035
Name : SKH5303-06C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 761718
Name : SKH5303-07C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 761792
Name : SKH5303-08C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 761831
Name : SKH5303-09C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 762241
Name : SKH5303-10C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 762254
Name : SKH5303-11C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 767424
Name : SKH5303-12S
Address :
Block code: SKH5303
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 767822
Name : SKH5303-13C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 764460
Name : SKH5303-14C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 764456
Name : SKH5303-15C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 767411
Name : SKH5303-16C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 764045
Name : SKH5303-17C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 766540
Name : SKH5303-18S
Address :
Block code: SKH5303
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 902400
Name : BAN5401-01S
Address :
Block code: BAN5401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 890390
Name : BAN5401-02S
Address :
Block code: BAN5401
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 764255
Name : PUJ5101-01C
Address :
Block code: PUJ5101
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 763431

Name : PUJ5101-02C
Address :
Block code: PUJ5101
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 763415

Name : PUJ5101-03C
Address :
Block code: PUJ5101
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 764252

Name : PUJ5101-04C
Address :
Block code: PUJ5101
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 766548

Name : PUJ5101-05C
Address :
Block code: PUJ5101
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 767709

Name : PUJ5101-06S
Address :
Block code: PUJ5101
Idle time for shipment : 10
Handle time for shipment: 5

Customer code: 763486

Name : PUJ5101-07C
Address :
Block code: PUJ5101
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 763428

Name : PUJ5101-08C
Address :
Block code: PUJ5101
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 767042

Name : PUJ5101-09C
Address :
Block code: PUJ5101
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 890994
Name : SKH5301-13S
Address :
Block code: SKH5301
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 890995
Name : BAN1402-02S
Address :
Block code: BAN1402
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 893675
Name : RAM1201-12S
Address :
Block code: RAM1201
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 835195
Name : PAT1301-6J
Address :
Block code: PAT1301
Idle time for shipment : 10
Handle time for shipment: 2

Customer code: 838545
Name : PAT1301-7J
Address :
Block code: PAT1301
Idle time for shipment : 10
Handle time for shipment: 2

Customer code: 891906
Name : SKH1501-4S
Address :
Block code: SKH1501
Idle time for shipment : 15
Handle time for shipment: 3

Customer code: 764074
Name : SKH5301-14C
Address :
Block code: SKH5301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 764061
Name : BAN1401-04C
Address :
Block code: BAN1401
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 760311
Name : SKH5303-19C
Address :
Block code: SKH5303
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 904880
Name : PAT1301-08C
Address :
Block code: PAT1301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 767602
Name : SKH5301-15C
Address :
Block code: SKH5301
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 163060
Name : ONN1302-04C
Address :
Block code: ONN1302
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 162210
Name : ONN1302-05C
Address :
Block code: ONN1302
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 163065
Name : ONN1302-06C
Address :
Block code: ONN1302
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 163073
Name : ONN1302-07C
Address :
Block code: ONN1302
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 163183
Name : ONN1302-08C
Address :
Block code: ONN1302
Idle time for shipment : 5
Handle time for shipment: 5

Customer code: 833885

Name : SKH1401-10C

Address :

Block code: SKH1401

Idle time for shipment : 5

Handle time for shipment: 5

ภาคผนวก ช

ชุดคำสั่งภาษา FOXPRO 2

* Program File : Calculate_route.prg
 * Purpose : Calculate transportation route.

SET CARRY ON
 SET SAFETY OFF

ACTIVATE WINDOW rout

N1 = .T.

DO WHILE N1

CLEAR

man = 'N'

@ 0, 0 TO 2,17 DOUBLE

@ 1, 1 SAY " TRUCK ROUTING "

@ 0,18 TO 2,36

@ 1,19 SAY " ROUTE CALCULATE "

@ 10, 0 SAY " WANT TO CALCULATE TRANSPORTATION ROUTE ? " GET man PICT '!' "

@ 14, 0 SAY " REMARK : This program is used for calculating route for "

@ ROW(),COL() SAY "all trucks to "

@ 15, 0 SAY " distribute product to customers. "

READ

IF READKEY() = 12 && Esc KEY

CLEAR

EXIT

ENDIF

IF man = 'Y'

@ 7, 0 CLEAR

DEFINE WINDOW rout1 FROM 10,25 TO 16,54 DOUBLE SHADOW COLOR SCHEME 7

ACTIVATE WINDOW rout1

@ 1, 3 SAY " P L E A S E W A I T "

@ 2, 3 TO 2,24

@ 3,3 SAY " CALCULATE BLC_SLCT "

DO BLC_SLCT

@ 3,3 SAY " CALCULATE TIM_GNRT "

DO TIM_GNRT

@ 3,3 SAY " CALCULATE SAV_CALC "

DO SAV_CALC

@ 3,3 SAY " CALCULATE ROU_CALC "

DO ROU_CALC

@ 3,3 SAY " CALCULATE TIM_CALC "

DO TIM_CALC

RELEASE WINDOW rout1

@ 7, 0 CLEAR

@ 12,22 SAY " C A L C U L A T E C O M P L E T E "

@ 13,22 TO 13,57

@ 22,12 SAY " REMARK : Please select REPORT menu for seeing result. "

@ 15,29 SAY " Press Any Key To EXIT "

READ

ENDIF (man = .Y.)

CLEAR

N1 = .F.

ENDDO N1

RELEASE ALL

DEACTIVATE WINDOW rout



```
SET CARRY OFF  
SET SAFETY ON  
CLOSE DATABASE  
RETURN
```

* Program File : SET_BLOCK.prg
* Purpose : Subprogram for deleting block that no have customers.
* Caution : use under program TRAN12 only.

```
SET CARRY ON
SET SAFETY OFF
```

```
SELECT 1
USE inv_trs
```

```
SELECT 2
USE blk_mas INDEX blccode
```

```
N1 = .T.
DO WHILE N1
```

```
    SELECT 2
    DELETE ALL
```

```
    SELECT 1
    DO WHILE .NOT.EOF()
        mblc = blc_code
```

```
        SELECT 2
        SEEK mblc
        IF DELETE()
            RECALL
        ENDIF
```

```
    SELECT 1
    SKIP
    ENDDO
```

```
    SELECT 2
    COPY TO blk_trs FOR .NOT.DELETE()
```

```
N1 = .F.
ENDDO (N1)
SET CARRY OFF
SET SAFETY ON
CLOSE DATABASE
RELEASE ALL
RETURN
```

* Program File : Time_Generate.prg
 * Purpose : Generate Block to Block transport time for truck

SET CARRY ON
 SET SAFETY OFF

SELECT 1
 USE link_mas INDEX blc_f_t

SELECT 2
 USE trvl_mas INDEX str_blk

SELECT 3
 USE tran_trs
 INDEX ON tra_from+tra_to TO trafrom
 SET INDEX TO trafrom

SELECT 4
 USE trvl_trs
 INDEX ON str_blk TO str_blc
 SET INDEX TO str_blc

SELECT 5
 USE blk_trs
 INDEX ON blc_code TO bckcode
 SET INDEX TO bckcode

N1=.T.
 DO WHILE N1

SELECT 3
 DELETE ALL
 PACK

SELECT 4
 ZAP

SELECT 2
 msblc1 = 'xxx'
 GO TOP
 LOCATE FOR str_blk (>) msblc1
 DO WHILE .NOT.EOF()
 msblc1 = str_blk
 COUNT TO mnumb FOR msblc1 = str_blk
 DIMENSION mmtrv(mnumb,5)
 RELEASE mmtrv
 SEEK msblc1
 COPY NEXT mnumb TO ARRAY mmtrv
 mrand = rand()
 FOR mag = 1 TO mnumb
 IF mrand (<= mmtrv(mag,5)
 mtime = mmtrv(mag,3)
 EXIT
 ENDIF
 ENDFOR

```

SELECT 4
APPEND BLANK
REPLACE str_blk WITH msblc1
REPLACE trv_time WITH mtime

SELECT 2
CONTINUE
ENDDO

SELECT 5
COUNT TO mnblc
map = .T.   && Tell : Have mfbc+mrbc or mtbc+mfbc in the SELECT 1 ?
FOR mae = 1 TO mnblc
  GOTO mae
  mfbc = blc_code

  SELECT 1
  SEEK mfbc+"SUN1500"
  IF EOF()
    SEEK "SUN1500"+mfbc
    IF .NOT.EOF()
      DIMENSION mdgtt(12)
      RELEASE mdgtt
      COPY TO ARRAY mdgtt FOR blc_from="SUN1500".AND.blc_to=mfbc
    ELSE
      map = .F.
    ENDIF
  ELSE
    DIMENSION mdgtt(12)
    RELEASE mdgtt
    COPY TO ARRAY mdgtt FOR blc_from=mfbc.AND.blc_to="SUN1500"
  ENDIF
  IF map = .T.
    mtrvtim = 0
    FOR mca = 3 TO 12
      IF mdgtt(mca) <> 'F'
        msblc = mdgtt(mca)

        SELECT 4
        SEEK msblc
        mtrvtim = mtrvtim + trv_time
      ELSE
        EXIT
      ENDIF
    ENDFOR

    SELECT 3
    APPEND BLANK
    REPLACE tra_from WITH mfbc
    REPLACE tra_to WITH "SUN1500"
    REPLACE tra_time WITH mtrvtim
  ENDIF

  SELECT 5
  FOR maf =mae+1 TO mnblc
    GOTO maf

```

```

mtbc = blc_code

SELECT 1
SEEK mfbc+mtbc
IF EOF()
  SEEK mtbc+mfbc
  IF .NOT.EOF()
    DIMENSION mdgtt(12)
    RELEASE mdgtt
    COPY TO ARRAY mdgtt FOR blc_from=mtbc.AND.blc_to=mfbc
  ELSE
    map = .F.
  ENDIF
ELSE
  DIMENSION mdgtt(12)
  RELEASE mdgtt
  COPY TO ARRAY mdgtt FOR blc_from=mfbc.AND.blc_to=mtbc
ENDIF
IF map = .T.
  mtrvtime = 0
  FOR mca = 3 TO 12
    IF mdgtt(mca) <> 'F'
      msblc = mdgtt(mca)

      SELECT 4
      SEEK msblc
      mtrvtime = mtrvtime + trv_time
    ELSE
      EXIT
    ENDIF
  ENDFOR

  SELECT 3
  APPEND BLANK
  REPLACE tra_from WITH mfbc
  REPLACE tra_to WITH mtbc
  REPLACE tra_time WITH mtrvtime
ELSE
  map = .T.
ENDIF

SELECT 5
ENDFOR maf

SELECT 5
ENDFOR mae
N1 = .F.
ENDDO N1
CLOSE DATABASE
SET CARRY OFF
SET SAFETY ON
RETURN

```

```
* Program File : Saving_time.prg
* Purpose      : Evaluate and sort saving time
```

```
SET CARRY ON
SET SAFETY OFF
```

```
SELECT 1
USE tran_trs INDEX trafrom
```

```
SELECT 2
USE tsav_trs
```

```
N1 = .T.
DO WHILE N1
```

```
    SELECT 2
    DELETE ALL
    PACK
```

```
    SELECT 1
    DO WHILE .NOT.EOF()
        mtrafr = tra_from
        mtrato = tra_to
        mreco = recno()
        IF mtrafr <> "SUN1500" .AND. mtrato <> "SUN1500"
            timIJ = tra_time
            SEEK mtrafr + "SUN1500"
            IF .NOT. EOF()
                timDI = tra_time
                SEEK mtrato + "SUN1500"
                IF .NOT. EOF()
                    timDJ = tra_time
                    savIJ = timDI + timDJ - timIJ
                ELSE
                    SEEK "SUN1500"+mtrato
                    timDJ = tra_time
                ENDIF
            ELSE
                SEEK "SUN1500" + mtrafr
                timDI = tra_time
                SEEK mtrato + "SUN1500"
                IF .NOT. EOF()
                    timDJ = tra_time
                ELSE
                    SEEK "SUN1500"+mtrato
                    timDJ = tra_time
                ENDIF
            ENDIF
            savIJ = timDI + timDJ - timIJ
            GOTO mreco
```

```
    SELECT 2
    APPEND BLANK
    REPLACE sav_from WITH mtrafr
    REPLACE sav_to WITH mtrato
    REPLACE sav_time WITH savIJ
```



```
ELSE
  SKIP
  LOOP
ENDIF (mchck <> "SUN1500")

SELECT 1
IF EOF()
  EXIT
ENDIF
SKIP
ENDDO (.NOT. EOF)

SELECT 2
SORT ON sav_time/D TO sav_trs
DELETE ALL
PACK
N1 =.F.
ENDDO
CLOSE DATABASE
SET CARRY OFF
SET SAFETY ON
RETURN
```

* Program File : Route_Calculate.prg
* Purpose : Calculate transportation route.

SET CARRY ON
SET SAFETY OFF

SELECT 1
USE blk_trs
INDEX ON blc_code TO blkcode
SET INDEX TO blkcode

SELECT 2
USE cus_trs

SELECT 3
USE inv_trs
INDEX ON blc_code TO blkcode
SET INDEX TO blkcode

SELECT 4
USE link_trs
INDEX ON lnk_trck TO lnkktrck
SET INDEX TO lnktrck

SELECT 5
USE sav_trs

SELECT 6
USE tran_trs INDEX trafrom

SELECT 7
USE rout_rep
INDEX ON rout_trck TO routtrck
SET INDEX TO routtrck

SELECT 8
USE prod_tbl INDEX ptype

SELECT 9
USE trck_tbl
INDEX ON trck_lvol TO trcklvol
SET INDEX TO trcklvol

SELECT 10
USE data_mas

SELECT 11
USE invv_trs

SELECT 10
GO TOP
m_first = data_mas
GOTO 2
m_lowest = data_mas

N1 = .T.

```

DO WHILE N1

    select 3
    reca all
* select 5 recall all ready.
    select 9
    reca all

    SELECT 7
    ZAP

    SELECT 4
    ZAP

* Read product volume for database.

    SELECT 8
    COUNT TO mprod
    DIMENSION mcomp(5)
    FOR mbd = 1 TO mprod
        GO mbd
        mcomp(mbd) = prod_vol
    ENDFOR
    IF mprod < 5
        FOR mbd = mprod+1 TO 5
            mcomp(mbd) = 0
        ENDFOR
    ENDIF
    RELEASE mbd

* End read

    msold = .T.
    mtckh = .T.
    mcusl = .F.
    morel = .F.
    mttl = 0

    DO WHILE msold = .T. .AND. mtckh = .T.
        IF m_first = 1      && Select first block from max saving_time.

* BLC_SLCT : Delete blocks, which have not invoices, in SELECT 1.

        SELECT 1
        DELETE ALL

        SELECT 3
        LOCATE FOR .NOT.DELETE()
        DO WHILE .NOT.EOF()
            .mblc = blc_code

            SELECT 1
            SEEK mblc
            IF DELETE()
                RECALL
            ENDIF

```

```

SELECT 3
CONTINUE
ENDDO

```

```
* END BLC_SLCT.
```

```

SELECT 5
msaving = .T.    && Have saving value.
RECALL ALL
COUNT TO marec  && all record in SELECT 5
GO TOP
n1 = .T.
DO WHILE n1
  mblcI = sav_from
  mblcJ = sav_to

```

```
* CHECK : Does Selected_blocks remain invoice ?
```

```

SELECT 1
LOCATE FOR blc_code = mblcI.AND..NOT.DELETE()
IF EOF()
  LOCATE FOR blc_code = mblcJ.AND..NOT.DELETE()
  IF .NOT.EOF()
    mblc = mblcI
    mblcI = mblcJ
    mblcJ = mblc
    RELEASE mblc
    EXIT
  ENDIF
ELSE
  EXIT
ENDIF

```

```
* END CHECK.
```

```

SELECT 5
IF RECNO() < marec
  SKIP
ELSE
  msold = .F.
  EXIT
ENDIF
ENDDO
IF msold = .F.
  LOOP
ENDIF

```

```
ELSE    && Select first block from assigned lowest volume.
```

```
DO VOLU_CAL  && PROC : Calc. total prod.volume for each customer.
```

```

SELECT 11
LOCATE FOR ttl_volu >= m_lowest
IF .NOT.EOF()
  mblc = blc_code

```



* Find maximum saving time for assigned block

```

SELECT 5
msaving = .T.    && Have saving value.
RECALL ALL
COUNT TO marec  && marec: all record in select 5
LOCATE FOR mb1c =sav_from .AND..NOT.DELETE()
IF .NOT.EOF()
    msavf = sav_time
ELSE
    msavf = 0
ENDIF
LOCATE FOR mb1c = sav_to .AND..NOT.DELETE()
IF .NOT.EOF()
    msavt = sav_time
ELSE
    msavt = 0
ENDIF
IF msavf >= msavt
    LOCATE FOR mb1c = sav_from .AND..NOT.DELETE()
    mb1cI = sav_from
    mb1cJ = sav_to
ELSE
    LOCATE FOR mb1c = sav_to .AND..NOT.DELETE()
    mb1cI = sav_to
    mb1cJ = sav_from
ENDIF
ELSE

```

* EXPRESSION : Do customers who have product volume>=m_lowest, still remain ?

```

msold = .F.
LOOP
ENDIF (.NOT.EOF())

```

* End find.

```

ENDIF

```

* CHECK : Do invoices still remain in the linked block.

```

SELECT 3
LOCATE FOR blc_code = mb1cI .AND..NOT.DELETE()
IF EOF()

SELECT 5
LOCATE FOR sav_from = mb1cI .AND. sav_to = mb1cJ
DELETE
*
SELECT 3
LOCATE FOR .NOT.DELETE()
IF EOF()
    msold = .F.
ENDIF
LOOP

```

ENDIF

* END CHECK

```

mblcU = mblcI
mblcV = mblcI
mblcS = mblcU
mblcT = mblcU

```

SELECT 3

LOCATE FOR blc_code = mblcU

IF .NOT.EOF()

mas = RECNO()-1

COUNT TO mncus FOR blc_code = mblcU .AND..NOT.DELETE()

RELEASE mcstm

DIMENSION mcstm(mncus,5)

LOCATE FOR blc_code = mblcU .AND..NOT.DELETE()

FOR mar = 1 TO mncus

mcstm(mar,1) = inv_code

mcstm(mar,2) = cus_code

mcstm(mar,3) = blc_code

mcstm(mar,4) = inv_volu

mcstm(mar,5) = RECNO()

CONTINUE

ENDFOR

FOR mar = 1 TO mncus

mtt1 = mtt1+mcstm(mar,4)

SELECT 3

GO mcstm(mar,5)

DELETE

SELECT 2

APPEND BLANK

REPLACE inv_code WITH mcstm(mar,1)

REPLACE blc_code WITH mcstm(mar,3)

ENDFOR

ENDIF (.NOT.EOF())

SELECT 9

LOCATE FOR .NOT. DELETE()

IF .NOT. EOF()

mld11 = trck_lvol

mldh1 = trck_hvol

mtrck = trck_num

CONTINUE

IF .NOT.EOF()

mld12 = trck_lvol

mldh2 = trck_hvol

ELSE

mld12 = 0

mldh2 = 0

ENDIF

msaving = .T.

mtran = .F.

```

DO WHILE mtran = .F.

*****
* DO CASE *
*****

DO CASE

*****
* CASE 1 *
*****
* Case : Product_volume < Truck_lowest_volume and Shipping invoice(s) still
* remain.

CASE mttl < mld11 .AND. msold = .T..AND. more1 = .F.

SELECT 3
LOCATE FOR .NOT.DELETE()
IF EOF()
msold = .F.
ENDIF

SELECT 5
GO TOP
DO WHILE mttl < mld11
LOCATE FOR .NOT.DELETE() REST
IF EOF()
msold = .F.
EXIT
ELSE
mrec5 = RECNO()
mnsav_t = 1
mblcI = sav_from
mblcJ = sav_to
mcan1 = .F.

* CHECKING : Can new block link previous block ?

IF mblcU = mblcI .OR. mblcU = mblcJ
mcan1 = .T.
msav_t = sav_time
ELSE
IF mblcV = mblcI .OR. mblcV = mblcJ
mcan1 = .T.
msav_t = sav_time
mblcT = mblcV
maq = mblcU
mblcU = mblcV
mblcV = maq
ENDIF
ENDIF

* END CHECK.

IF mcan1 = .T.

```

* FIND : Case of there are many links that have same saving time,
 * this process find the link that has minimum transport time.

```

COUNT TO mnsav_t FOR sav_time = msav_t
IF mnsav_t > 1
  RELEASE mmsav_t
  DIMENSION mmsav_t(mnsav_t,4)
  LOCATE FOR sav_time = msav_t
  COPY NEXT mnsav_t TO ARRAY mmsav_t
* <- 20
FOR mar = 1 TO mnsav_t
  IF mblcU = mmsav_t(mar,1) .OR. mblcU = mmsav_t(mar,2)

  SELECT 6
  LOCATE FOR tra_from=mmsav_t(mar,1).AND.tra_to=mmsav_t(mar,2)
  mmsav_t(mar,4) = tra_time
ELSE
  IF mblcV = mmsav_t(mar,1) .OR. mblcV = mmsav_t(mar,2)

  SELECT 6
  LOCATE FOR tra_from=mmsav_t(mar,1).AND.tra_to=mmsav_t(mar,2)
  mmsav_t(mar,4) = tra_time
ELSE
  mmsav_t(mar,4) = 0
ENDIF
ENDIF
ENDFOR

* PREVENT : Reusing saving_time which was used and deleted ready.

SELECT 5
FOR mar = 1 TO mnsav_t
  LOCATE FOR sav_from = mmsav_t(mar,1).AND.sav_to = mmsav_t(mar,2)
  IF .NOT.EOF()
    IF DELETE()
      mmsav_t(mar,4) = 1001
    ENDIF
  ENDIF
ENDFOR

* END PREVENT.

* -> 20
      mtra_t = 1000
      FOR mar = 1 TO mnsav_t

* <- 21
IF mmsav_t(mar,4) < mtra_t .AND. (mmsav_t(mar,1)=mblcU .OR. mmsav_t(mar,2)=mblcU)
  mtra_t = mmsav_t(mar,4)
  mblcI = mmsav_t(mar,1)
  mblcJ = mmsav_t(mar,2)
ELSE
  IF mmsav_t(mar,4) < mtra_t .AND. (mmsav_t(mar,1)=mblcV .OR. mmsav_t(mar,2)=mblcV)
    mtra_t = mmsav_t(mar,4)
    mblcI = mmsav_t(mar,1)
    mblcJ = mmsav_t(mar,2)
  ENDIF

```


ENDIF
 * -> 21

```

    ENDFOR
    IF mblcV = mblcI .OR. mblcV = mblcJ
      mblcT = mblcV
      maq   = mblcU
      mblcU = mblcV
      mblcV = maq
    ENDIF
  ENDFIF mnsav_t > 1

```

* END FIND.

```

SELECT 5
LOCATE FOR sav_from = mblcI .AND. sav_to = mblcJ
mblcS = mblcU
IF mblcU = mblcJ
  mblcU = mblcI
ELSE
  mblcU = mblcJ
ENDIF
DELETE
mnoinv =.F.

```

* CHECK : Do invoices still remain in the linked block.

```

SELECT 3
LOCATE FOR blc_code = mblcU .AND..NOT.DELETE()
IF EOF()
  mnoinv = .T.
ENDIF

```

* END CHECK

```

IF mnoinv =.F.
  mblcT = mblcU

  SELECT 3
  LOCATE FOR blc_code = mblcU .AND..NOT. DELETE()
  IF .NOT.EOF()
    mas = RECNO()-1
    COUNT TO mncus FOR blc_code = mblcU.AND..NOT.DELETE()
    RELEASE mstm
    DIMENSION mstm(mncus,5)
    LOCATE FOR blc_code = mblcU .AND..NOT.DELETE()
    FOR mar = 1 TO mncus
      mstm(mar,1) = inv_code
      mstm(mar,2) = cus_code
      mstm(mar,3) = blc_code
      mstm(mar,4) = inv_volu
      mstm(mar,5) = RECNO()
      CONTINUE
    ENDFOR
    FOR mar = 1 TO mncus
      mtl1 = mtl1+mstm(mar,4)
    ENDIF
  ENDIF
  SELECT 3

```

```
GO mcstm(mar,5)
DELETE
```

* ← 10

```
SELECT 4
LOCATE FOR mblcS=lnk_from.AND.mblcT=lnk_to.AND.mtrck=lnk_trck
IF EOF()
  LOCATE FOR mblcS = lnk_from.AND.mtrck=lnk_trck
  IF EOF()
    muses = .F.
    LOCATE FOR mblcS = lnk_to.AND.mtrck=lnk_trck
    IF EOF()
      muset = .F.
      LOCATE FOR mblcT = lnk_from.AND.mtrck=lnk_trck
      IF EOF()
        muses = .F.
        LOCATE FOR mblcT = lnk_to.AND.mtrck=lnk_trck
        IF EOF()
          muset = .F.
        ELSE
          muset = .T.
          REPLACE lnk_tu WITH muset
        ENDIF
      ELSE
        muset = .T.
        REPLACE lnk_fu WITH muset
      ENDIF
    ELSE
      muses = .T.
      REPLACE lnk_tu WITH muses
    ENDIF
  ELSE
    muses = .T.
    REPLACE lnk_fu WITH muses
  ENDIF
  APPEND BLANK
  REPLACE lnk_trck WITH mtrck
  REPLACE lnk_from WITH mblcS
  REPLACE lnk_to WITH mblcT
  REPLACE lnk_fu WITH muses
  REPLACE lnk_tu WITH muset
ENDIF
```

* → 10

```
SELECT 2
APPEND BLANK
REPLACE inv_code WITH mcstm(mar,1)
REPLACE blc_code WITH mcstm(mar,3)
ENDFOR
ENDIF (.NOT.EOF())
ELSE
  mblcU = mblcS
ENDIF (mnoinv = .F.)

SELECT 5
GO TOP
```

```

ENDIF (mcan1 = .T.)

SELECT 5
IF mrec5 + mnsav_t <= marec
  GO mrec5 + mnsav_t
ELSE
  msaving = .F.  && All Saving_time are used ready.
  EXIT
ENDIF
ENDIF EOF()
ENDDO (mtt1 < mldl1)

*****
* CASE 2 *
*****
* Case : Product_volume < Truck_lowest_volume and all shipping invoices are
* shipped ready.

CASE mtt1 < mldl1 .AND. msold = .F.

  SELECT 2
  GO TOP
  DO WHILE .NOT.EOF()
    mcodet = inv_code
    mbcode = blc_code

    SELECT 3
    LOCATE FOR inv_code = mcodet
    RECALL

    SELECT 2
    SKIP
  ENDDO
  DELETE ALL
  PACK

  SELECT 4
  LOCATE FOR lnk_trck = mltrck
  DO WHILE .NOT.EOF()
    DELETE
    CONTINUE
  ENDDO
  PACK
  mtran = .T.
  mtt1 = 0

*****
* CASE 3 *
*****
* Case : Product_volume < Truck_lowest_volume and Can't find optimal route,
* because all saving_time are used ready.

CASE mtt1 < mldl1 .AND. msaving = .F.

  SELECT 2
  GO TOP

```

```

DO WHILE .NOT.EOF()
  mcodet = inv_code
  mbcode = blc_code

  SELECT 7
  APPEND BLANK
  REPLACE rout_trck WITH mtrck
  REPLACE rout_invc WITH mcodet
  REPLACE rout_blk WITH mbcode

  SELECT 2
  SKIP
ENDDO
DELETE ALL
PACK

SELECT 9
LOCATE FOR trck_lvol = mldl1.AND..NOT.DELETE()
DELETE
mtran = .T.
mttl = 0

SELECT 3
LOCATE FOR .NOT.DELETE()
IF EOF()
  msold = .F.
ENDIF

*****
* CASE 4 *
*****
* Case : Truck_lowest_volume < Product_volume < Truck_highest_volume.

CASE mldl1 <= mttl .AND. mttl <= mldh1

  SELECT 2
  GO TOP
  DO WHILE .NOT.EOF()
    mcodet = inv_code
    mbcode = blc_code

    SELECT 7
    APPEND BLANK
    REPLACE rout_trck WITH mtrck
    REPLACE rout_invc WITH mcodet
    REPLACE rout_blk WITH mbcode

    SELECT 2
    SKIP
  ENDDO
  DELETE ALL
  PACK

  SELECT 9
  LOCATE FOR trck_lvol = mldl1.AND..NOT.DELETE()
  DELETE

```

```
mtran = .T.
mttl = 0
```

```
SELECT 3
LOCATE FOR .NOT.DELETE()
IF EOF()
  msold = .F.
ENDIF
```

```
*****
```

```
* CASE 5 *
*****
```

```
* Truck_highest_volume < Product_volume.
```

```
CASE mldh1<mttl.AND.(mttl<=mld1/2.OR.mldh2<=mttl)
```

```
SELECT 5
LOCATE FOR mblcI=sav_from .AND.mblcJ=sav_to
```

```
* Sort products quantity from max to min in one block transporting
* for matrix mAaa.
* For choosing customer code: to delete, when transporting volume is
* too much.
```

```
DIMENSION mAaa(mncus,2)
FOR mar = 1 TO mncus
  mat = 0
  FOR mau = 1 TO mncus
    IF mat < mcstm(mau,4)
      mav = mcstm(mau,1)
      mat = mcstm(mau,4)
    ENDIF
  ENDFOR
  FOR mau = 1 TO mncus
    IF mat = mcstm(mau,4)
      mcstm(mau,4) = 0
      EXIT
    ENDIF
  ENDFOR
  mAaa(mar,1) = mav
  mAaa(mar,2) = mat
ENDFOR
FOR may = 1 TO mncus
  FOR maz = 1 TO mncus
    IF mcstm(may,1) = mAaa(maz,1)
      mcstm(may,4) = mAaa(maz,2)
      EXIT
    ENDIF
  ENDFOR
ENDFOR
```

```
* End sorting.
```

```
DO WHILE mttl > mldh1
  mbc = .F.
  mover = mttl - mldh1
```

```

FOR mar = 1 TO mncus
  IF mAaa(mncus+1-mar,2)>mover.AND.mAaa(mncus+1-mar,2)<>0
    mbb = mAaa(mncus+1-mar,1)
    mbc = .T.
    EXIT
  ENDIF
ENDFOR
IF mbc = .T.
FOR mar = 1 TO mncus
  IF mAaa(mar,1) = mbb
    mAaa(mar,2) = 0
  EXIT
ENDIF
ENDFOR
ENDIF
IF mbc = .F.
FOR mar = 1 TO mncus
  IF mAaa(mar,2) <> 0
    mbb = mAaa(mar,1)
    mAaa(mar,2) = 0
  EXIT
ENDIF
ENDFOR
ENDIF

SELECT 3
LOCATE FOR inv_code = mbb
IF .NOT.EOF()
  mcodeI = inv_code

  SELECT 2
  LOCATE FOR inv_code = mcodeI.AND..NOT.DELETE()
  IF .NOT.EOF()
    DELETE

    SELECT 3
    LOCATE FOR inv_code = mbb
    RECALL
    mttl = mttl-inv_volu
  ENDIF

  SELECT 2
  PACK
ENDIF
ENDDO (mttl>mlch1)

```



* CHECK : All invoices in this block are not shipped by present truck.

```

more1 = .T.
FOR mar = 1 TO mncus
  IF mAaa(mar,2)<>0
    more1 =.F.
  ENDIF
ENDFOR

```

* END CHECK

RELEASE mAaa

* CASE 6 *

* Case : from case 5, if cancel all shipping invoice from "mblcU" block
 * this case do: - return the old block to mblcU
 * - erase link (routing) in select 4
 * - delete saving_time which is recalled in case 5
 * in select 5 again.

CASE mttl < mldh1 .AND. morel =.T.

* Return "mblcU" to the old block.

mblcU = mblcS

* <- 10

SELECT 4

LOCATE FOR mblcS = lnk_from .AND. mblcT = lnk_to.AND.mtrck=lnk_trck
 IF .NOT.EOF()

DELETE

ENDIF

LOCATE FOR mblcS = lnk_from.AND.mtrck=lnk_trck.AND..NOT.DELETE()
 IF EOF()

LOCATE FOR mblcS = lnk_to.AND.mtrck=lnk_trck.AND..NOT.DELETE()
 IF EOF()

LOCATE FOR mblcT = lnk_from.AND.mtrck=lnk_trck.AND..NOT.DELETE()
 IF EOF()

LOCATE FOR mblcT = lnk_to.AND.mtrck=lnk_trck.AND..NOT.DELETE()
 IF .NOT.EOF()

muset = .F.

REPLACE lnk_tu WITH muset

ENDIF

ELSE

muset = .F.

REPLACE lnk_fu WITH muset

ENDIF

ELSE

muses = .F.

REPLACE lnk_tu WITH muses

ENDIF

ELSE

muses = .F.

REPLACE lnk_fu WITH muses

ENDIF

* -> 10

SELECT 5

LOCATE FOR sav_from = mblcI .AND. sav_to = mblcJ
 IF .NOT.EOF()

DELETE

ELSE

LOCATE FOR sav_from = mblcJ .AND. sav_to = mblcI

```

        IF .NOT.EOF()
            DELETE
        ENDIF
    ENDIF
    more1 = .F.

    SELECT 4
    PACK

*****
*   CASE 7   *
*****
* Case : Product_volume is in the volume range of next truck.

    CASE mld12 <= mtt1.AND.mtt1 <= mldh2

        SELECT 9
        SEEK mld12
        mtrck = trck_num
        DELETE
        mtran = .T.
        mtt1 = 0

        SELECT 2
        DO WHILE .NOT.EOF()
            mcodet = inv_code
            mbcodc = blc_code

            SELECT 7
            APPEND BLANK
            REPLACE rout_trck WITH mtrck
            REPLACE rout_invc WITH mcodet
            REPLACE rout_blc WITH mbcodc

            SELECT 2
            SKIP
        ENDDO
        DELETE ALL
        PACK

        SELECT 3
        LOCATE FOR .NOT.DELETE()
        IF EOF()
            msold = .F.
        ENDIF

    OTHERWISE

        msold = .F.

    ENDCASE

*****
*   ENDCASE   *
*****

```



```

        ENDDO (mtran = .F.)
ELSE
    mtckh = .F.  && EXPRESS : No truck for shipping.

    SELECT 2
    LOCATE FOR .NOT.DELETE()
    DO WHILE .NOT.EOF()
        minvc = inv_code
        DELETE

        SELECT 3
        LOCATE FOR inv_code = minvc
        RECALL

        SELECT 2
        CONTINUE
    ENDDO

    SELECT 2
    PACK
ENDIF(.NOT.DELETE)

ENDDO (msold = .T..AND.mtckh=.T.)
N1 = .F.
ENDDO N1
CLOSE DATABASE
RELEASE ALL
SET CARRY OFF
SET SAFETY ON
RETURN

PROCEDURE volu_cal

SELECT 11
ZAP
mccdeh = .F.
m_ccde = "aaaaaa"
DO WHILE mccdeh = .F.

    SELECT 3
    LOCATE FOR cus_code <> m_ccde .AND..NOT.DELETE()
    IF .NOT.EOF()
        DO WHILE .NOT.EOF()
            m_ccde = cus_code
            m_bcde = blc_code

            SELECT 11
            LOCATE FOR cus_code = m_ccde
            IF EOF()
                mcccdeh = .F.
                EXIT
            ELSE
                mcccdeh = .T.

            SELECT 3
            CONTINUE

```

```
        ENDIF
    ENDDO
ELSE
    mccdeh = .T.
ENDIF
IF mccdeh = .F.
    m_tvolu = 0

    SELECT 3
    LOCATE FOR cus_code = m_ccde .AND..NOT.DELETE()
    DO WHILE .NOT.EOF()
        m_tvolu = m_tvolu + inv_valu
        CONTINUE
    ENDDO

    SELECT 11
    APPEND BLANK
    REPLACE cus_code WITH m_ccde
    REPLACE blc_code WITH m_bcde
    REPLACE tt1_valu WITH m_tvolu
ENDIF
ENDDO
RETURN
```

```
* Program File : Time_Calculate.prg
* Purpose      : Calculate total time for transport of trucks and
*              : assign trucks for second transporting
```

```
SET CARRY ON
SET SAFETY OFF
```

```
SELECT 1
USE cust_mas INDEX cuscode
```

```
SELECT 2
USE inv_trs
INDEX ON inv_code TO invcde
SET INDEX TO invcde
```

```
SELECT 3
USE link_trs INDEX lnktrck
```

```
SELECT 4
USE tran_trs INDEX trafrom
```

```
SELECT 5
USE rout_rep INDEX routtrck
```

```
SELECT 6
USE time_rep
INDEX ON tim_trck TO timtrck
SET INDEX TO timtrck
```

```
N1 = .T.
DO WHILE N1
```

```
    SELECT 1
    RECALL ALL
```

```
    SELECT 6
    ZAP
```

```
    SELECT 5
    GO TOP
    mtnum = 1
    mcnum = 0
    mah   = rout_trck
```

```
* Count trucks number which are used for transporting
```

```
DO WHILE .NOT. EOF()
    SKIP
    IF .NOT. EOF()
        IF rout_trck <> mah
            mtnum = mtnum+1
            mah   = rout_trck
        ENDIF
    ENDIF
ENDDO
```

```

DIMENSION mtruck(mtrnum)
GO TOP
mai = 1
mtruck(mai) = rout_trck
DO WHILE .NOT. EOF()
  IF rout_trck (>) mtruck(mai)
    mai = mai + 1
    mtruck(mai) = rout_trck
  ENDIF
  SKIP
ENDDO
FOR maj = 1 TO mtrnum
  COUNT TO mcnum FOR rout_trck = mtruck(maj)
  DIMENSION mtcus(mcnum,3)
  SEEK mtruck(maj)
  COPY NEXT mcnum TO ARRAY mtcus
  DIMENSION mhtim(mcnum,2)
  FOR mak = 1 TO mcnum

    SELECT 2
    SEEK mtcus(mak,2)
    mcde = cus_code

    SELECT 1
    SEEK mcde
    DELETE
    mhtim(mak,1) = cus_idle
    mhtim(mak,2) = cus_hand
  ENDFOR
  DIMENSION mevol(mcnum)

  SELECT 2
  FOR mal = 1 TO mcnum
    SEEK mtcus(mal,2)
    mevol(mal) = inv_volu
  ENDFOR

```

* Calculate idle time

```

SELECT 1
midtim = 0
LOCATE FOR DELETE()
DO WHILE .NOT.EOF()
  midtim = midtim + cus_idle
  CONTINUE
ENDDO
RECALL ALL
mhtim = 0

```

* Calculate handle time

```

FOR mam = 1 TO mcnum
  mhtim = mhtim + mhtim(mam,2)*mevol(mam)
ENDFOR
mhtim = mhtim + midtim

```

```

mthtim = 0
FOR man = 1 TO mcnun
  mthtim = mthtim + mhtim(man,1) + mhtim(man,2)*mevol(man)
ENDFOR

```

```

SELECT 3
SEEK mtruck(maj)
IF .NOT. EOF()
  COUNT TO mlnum FOR lnk_trck = mtruck(maj)
  DIMENSION mlink(mlnum+2,3)
  SEEK mtruck(maj)
  COPY NEXT mlnum TO ARRAY mlink
  LOCATE FOR lnk_fu = .F..AND.lnk_trck = mtruck(maj)
  IF .NOT. EOF()
    mlink(mlnum+1,2) = lnk_from
    mlink(mlnum+1,3) = "SUN1500"
    man = .T.
  ELSE
    man = .F.
  ENDIF
  CONTINUE
  IF .NOT. EOF()
    IF man = .F.
      mlink(mlnum+1,2) = lnk_from
      mlink(mlnum+1,3) = "SUN1500"
      man = .T.
    ELSE
      mlink(mlnum+2,2) = lnk_from
      mlink(mlnum+2,3) = "SUN1500"
    ENDIF
  ENDIF
  LOCATE FOR lnk_tu = .F..AND.lnk_trck = mtruck(maj)
  IF .NOT. EOF()
    IF man = .F.
      mlink(mlnum+1,2) = lnk_to
      mlink(mlnum+1,3) = "SUN1500"
      man = .T.
    ELSE
      mlink(mlnum+2,2) = lnk_to
      mlink(mlnum+2,3) = "SUN1500"
    ENDIF
  ENDIF
  CONTINUE
  IF .NOT. EOF()
    mlink(mlnum+2,2) = lnk_from
    mlink(mlnum+2,3) = "SUN1500"
  ENDIF

```

```

SELECT 4
mtttim = 0
FOR mao = 1 TO mlnum + 2
  SEEK mlink(mao,2)+mlink(mao,3)
  IF .NOT. EOF()
    mtttim = mtttim + tra_time
  ELSE
    SEEK mlink(mao,3)+mlink(mao,2)

```

```

        IF .NOT. EOF()
            mtttim = mtttim + tra_time
        ENDIF
    ENDIF
ENDFOR
ELSE

    SELECT 5
    SEEK mtruck(maj)
    mblock = rout_blk

    SELECT 4
    SEEK mblock+"SUN1500"
    IF .NOT.EOF()
        mtttim = 2*tra_time
    ELSE
        SEEK "SUN1500"+mblock
        IF .NOT.EOF()
            mtttim = 2*tra_time
        ENDIF
    ENDIF
ENDIF SEEK mtruck(maj).NOT.EOF()

mftime = mthtim + mtttim
mscd = .F.
IF mftime <= 360
    mscd = .T.
ENDIF

SELECT 6
APPEND BLANK
REPLACE tim_trck WITH mtruck(maj)
REPLACE tim_hand WITH mthtim
REPLACE tim_tran WITH mtttim
REPLACE tim_ttl WITH mftime
REPLACE tim_scd WITH mscd

SELECT 5
ENDFOR maj = 1 TO mtrun
N1 =.F.
ENDDO (N2)
RELEASE ALL
CLOSE DATABASE
SET CARRY OFF
SET SAFETY ON
RETURN

```

ประวัติผู้เขียน

นาย สุธี ศรีเพชรदानนท์ เกิดวันที่ 4 พฤษภาคม พ.ศ.2510 ที่จังหวัดกรุงเทพฯ สำเร็จการศึกษาปริญญาวิศวกรรมศาสตรบัณฑิต (สาขาวิศวกรรมการผลิต) จากคณะวิศวกรรมศาสตร์ สถาบันเทคโนโลยีพระจอมเกล้า พระนครเหนือ ในปีการศึกษา 2531 และเข้าศึกษาต่อในระดับปริญญาโท สาขาภาควิชาวิศวกรรมอุตสาหกรรม คณะวิศวกรรมศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย ในปีการศึกษา 2533

