Issuer: 2510   GUNNEL ISAKSSON   031-667162

Subject: GGG-prot   91-06-27

Protocol from the 'GGG-meeting' in Gothenburg, june 3rd - 7th.
==

Volvo Data has a management responsibility not only for the
datacenter in Gothenburg but also for VEDA in Gent and VDNA
in Greensboro. In order to increase the cooperation between
these datacenters Ronny Wester has initiated an activity that
is called the 'GGG-project'.

The task for the project is to create a plan for how to
standardize our datacenters and increase the co-operation
between the datacenters. The reasons for standardization
are basically:

  - our customers have expressed a need for a commonality between
    the datacenters. They have asked for similar services from
    Volvo Datas datacenters and they need a flexibility in
    exchanging applications and data between the centers.

  - our customers have asked for a similar structure for the
    pricelists from the datacenters so that the prices mean the
    same and can be compared. This also gives a possibility to
    compare the efficiency between the datacenters.

  - standardized datacenters makes it possible for us to move load
    between the datacenters in order to efficiently use the
    capacity installed at Volvo Datas sites.

  - standardized datacenters also makes it possible for one
    datacenter to be backup for another datacenter, both in terms
    of equipment and personel. One datacenter can be operated
    remote from another site and we can take advantage of
    different time zones.

  - we can achieve a more efficient use of the skill from our
    technicians and operations personel. We can exchange manpower
    between the centers and it is not necessary to 'invent the
    wheel' more than once.

  - achieve an improved quality at the datacenters

  - reduce the purchasing costs by buying at the location where
    the vendors offer the best prize

  - it is a strategic issue to have the datacenters look and
    act as one datacenter

The project is restricted to operations, technical support and
communications for the MVS-systems and the network at the 3 sites.

Issuer: 2510   GUNNEL ISAKSSON   031-667162

Subject: GGG-prot   91-06-27

The agenda for the meeting consisted of the selected areas
which we had identified as strategic to reach the goals of
standardized datacenters. General conclusions made during the
meeting:

- we need a strategy for the role, services and functions each
  datacenter shall provide

- VEDA is much more like Volvo Data than VDNA. VEDA has used
  MEXPACK for many years and has often used the solutions
  provided by Volvo Data.

- both VEDA and VDNA are small compared to Volvo Data and
  because of this it is not always possible to afford the
  same software and hardware on these locations

- an increased cooperation between the datacenters needs an
  increased travelling

- MEXPACK is a good base in order to achieve a standardization,
  increased quality and rationalization

- MEXPACK has to be tailored to a new situation. Before it was
  a copy of a Volvo Data system, now it must be the glue
  between 3 datacenters and solve the needs at these 3
  locations. The documentation must be improved and all
  functions must be shipped in a proper way.

- Volvo Data has the biggest manpower and for some areas that
  requires a lot of resources Volvo Datas responsibilities
  has to be extended. Instead of running projects at 3 locations
  we will do it in one and extend the responsibility to also
  include the other datacenters. It is important to have the
  participation from the other datacenters in the joint
  projects.

- common documentation must be done in English

- we need a common defined, agreed and documented naming
  standard

- we need a common defined, agreed and documented JCL

- VEDA and VDNA empoyees are VD-employees. This must be
  communicated and much of the information must be global.
  One suggestion is to have the employee paper, Terminalen,
  sent to VEDA and VDNA and have articles translated to
  different languages.

Issuer: 2510   GUNNEL ISAKSSON   031-667162

Subject: GGG-prot   91-06-27
_____

Summary and conclusions for the selected topics.
_____

Operations and automation:

- automation of operations is a major project. Volvo Data is
  spending a lot of resources in this area. This project must
  be a joint project with participation from VEDA and VDNA.
  Volvo Datas responsibilities must be extended and the
  project must pick up the needs for VEDA and VDNA and their
  current position and define the strategy for the project.

- solutions and products for operation and automation must be
  shipped in MEXPACK. We need a common mandatory base with local
  options.

- we have some conflicts regarding used products at the
  sites but we agreed on using the VD-strategy

- questions with Volvo Datas strategy in this area are when
  there will be available products and what these products
  will cost

- when VDNA installs OPCA it might be a good oppurtunity to
  change JCL according to a common standard

Storage Management:

- we have different backup philosophies at the datacenters
  and the responsibility between Volvo Data and the customer
  differs between the sites

- portable applications need the same functions, services and
  standards at all locations. Same software for the functions is
  not always necessary but makes it easier and provides a
  safer way of ensuring high quality.

- same accounting must be implemented

- the difference in size between the datacenters means that
  it is not always possible to have the same software and
  hardware

- Volvo Datas SMS-project must be extended to also include
  VEDA and VDNA. We need to pick up the needs from VEDA and
  VDNA and their current position and define the strategy and
  we need the participation from VEDA and VDNA in the project.

Security:

- security is a global matter and must be implemented in a
  similar way to achieve a secure environment

- the Security Committe and Security Board have an
  international responsibility. The rules are set by the
  Board and we must all follow these.

- Volvo Data must supply VEDA and VDNA with solutions,
  guideance and information regarding security

Issuer: 2510 GUNNEL ISAKSSON   031-667162

Subject: GGG-prot   91-06-27

Data Base Systems:

- VDNA needs IMS V3 and CICS V2 before Volvo Data can supply
  these versions in MEXPACK. VDNA must install the new versions
  themselves and convert to MEXPACK later this fall.

- software cost is a problem due to different size. VEDA and
  VDNA can't always afford to install the same tools as Volvo
  Data. We need to define a common mandatory base and optional
  software that can be installed.

- Volvo Data developed tools can be used either at Volvo Data
  or shipped in MEXPACK. We will look into the possibility
  to ship VINFO and GENI in MEXPACK.

Communications:

- Volvo Data suggests the splitting of the physical network
  in 3 parts. VEDA will be responsible for the physical network
  in Europe, VDNA will be responsible for the physical network
  in North America.

- we need to agree on a common naming standard for the communi-
  cations area

- Volvo Data (2200) must initiate a project for SNA-coordination.
  Topics that must be included are responsibilities, the
  generation process, standards and operations.

- we must agree on a common way of calculating and accounting
  for network services

- a topic also to be discussed is if we shall have a co-operative
  operation of the network. Shall the operation be shifted
  between the datacenters during weekends, nights and vacations?

Accounting:

- we will aim for similar principles of price-calculation and a
  similar structure for the price lists in 1993. In order to do
  this we need to define the items in the price list, we need to
  collect data in order to be able to set a price, we need the
  same structure for calculation the prices and handling the
  costs.

Issuer: 2510 GUNNEL ISAKSSON   031-667162

Subject: GGG-prot   91-06-27

Quality process:

- if it is cost effective we should have the same way of
  measuring availability and response times in order to be able
  to compare figures

- at a start we will have separate reports for each datacenter

- VMF must be shipped in MEXPACK to VDNA

- in 92 we will start a project to find a common and better
  way of measuring response times. This project is a joint
  project between the locations.

- we must have coordination of changes that affects the other
  datacenters. A suggestion is to have a flag in the change
  record to indicate if the change is local or global.

- Infoman and Volvo Data developed tools must be shipped in
  MEXPACK. We will start a project when the new version of
  Infoman is to be installed to define the procedures and
  tools. This project is a joint project between the locations.

- another possibility is to use Infoman for problem and
  change at Volvo Data. We will also look into the possi-
  bility of using QBASE at Volvo Data or shipping the
  tool in MEXPACK.

- VEDA will start to use Infoman at Volvo Data this fall
  for problem and change

- we should have the same skeleton for SLA-agreements at
  each datacenter. Volvo Data have a skeleton that can be
  used.

Issuer: 2510   GUNNEL ISAKSSON   031-667162

Subject: GGG-prot   91-06-27

Decisions for the continued work:

- we will have a steering board for the coordination and joint
  cooperation between the datacenters. The board will also deal
  with strategic issues and make decisions regarding the joint
  projects. Ronny Wester will be the chairman. The steering board
  will meet 2 times a year. The next meeting will take place
  this year late october or in november.

- we will have a product board that will meet 2 times a year in
  close connection with the steering board. The purpose with the
  product board is to exchange experiences, coordinate the
  product plans and project plans and to coordinate testing and
  installation of new products/releases. Tomas Svensson is
  responsible in defining the purpose and the role with the
  product board.

- installation of MEXPACK at VDNA has the highest priority. It is
  important to make sure that MEXPACK is designed in accordance
  with the needs from the 3 locations. MEXPACK must be well
  documented and all functions must be shipped in a proper way.
  Critical issues are common naming standards for datasets, SNA
  components and JCL. MEXPACK must be designed with a common
  mandatory base and with the possibilities of local options.

- it is important to start activities in defining the principles
  for a similar price structure for 1993. This requires a
  definition of services and a similar structure for the
  calculation of prices and a similar way of handling costs.
  Ann Elmeland-Ygge is responsible for this activity.

- a project for SNA-coordination must be started after
  this summer. Arne Hasselgren is responsible for this
  activity.

- we will start joint projects in accordance to available
  resources. Automation should start after this summer. Håkan
  Robertsson is responsible for this subject and will take
  contacts with VEDA and VDNA. SMS will probably be a later
  activity according to available resources at VDNA. Lars
  Danielsson is responsible for this subject.

- each datacenter is responsible for its capacity planning and
  tuning. Lars Åström will look into the possibility of having a
  cooperation in capacity planning and tuning and a way of
  exchanging ideas and experiences.

- a similar quality process is not a prioritized activity
  for now. Though, VEDA would like to use Infoman at Volvo
  Data this fall for change and problem. Later this fall
  we will discuss the use of the QBASE tool.

- we see a need in having video conferencing between the
  datacenters. Lars Oden is responsible for an
  investigation of this topic and this investigation
  must look into the possibilities and the extent of this
  need between the datacenters.

Tomas Svensson, 2500

Issuer: 2510   LARS DANIELSSON TEL.031-667479   031-667479

Subject: GGG-projdir.   91-09-18

Project Directive for the GGG-project.
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Volvo Data has a management responsibility not only for the
datacenter in Gothenburg but also for VEDa in Gent and VDNA
in Greensboro. Our customers have expressed a need for a
commonality between these datacenters, they have asked for
similar services and they need a flexibility in exchanging
data between the datacenters.

In order to satisfy our customer needs and achieve rationality
and more efficiently use our resources the GGG-project has
been started. GGG stands for Gothenburg, Gent and Greensboro.
The purpose with the project is to standardize products and
methods for operations, technical support and communications
and increase the co-operation between the datacenters.

The goals for the project are:

  - make it possible and easy to move applications and data
    between the datacenters

  - make it possible to balance load between the datacenters

  - use one datacenter as backup for another datacenter

  - make it possible to remotely operate one datacenter from
    another datacenter

  - define and agree on a common name standard

  - define and agree a common JCL

  - define and agree on a common method of calculating prices

  - define and agree on a common structure for the price lists

  (- reduce the purchasing costs by buying at the location where
    the vendors offer the best prize)

Issuer: 2510   LARS DANIELSSON TEL.031-667479   031-667479

Subject: GGG-projdir.   91-09-18

The project is divided in the following subprojects:

1. Common Platform and Mexpack

   A common platform for our datacenters must be defined. It
   consist of a base with mandatory products and products that are
   optional depending on the installation. The documentation also
   includes methods, name-standards for system datasets, JCL-rules
   and a description of how the products are implemented and
   distributed.

   Responsible: Inge Forsberg, 2510, and Bert Christensson, 2520
          VEDA: Hubert Francet 7600, and Wim Clement 7600
          VDNA: Fay Donahue, 1068

2. Database Systems

   To develop a product plan that leads to standardized
   database systems at the 3 datacenters with respect to
   local needs and differences in size of installation.

   Responsible: Perry Lundquist, 2540
          VEDA: Hubert Francet 7600
          VDNA: Lynn Delacour, 1068

3. Storage Management

   To develop a product plan that leads to standardized
   storage management at the 3 datacenters with respect to
   local needs and differences in size of installation.

   Responsible: Lars Danielsson, 2510
          VEDA: Willy De Waele, 7600
          VDNA: Vern Chanda, 1068

4. Operation and Automation

   To define products and methods used for supervising the
   MVS-environments. Define a strategy for automation of
   the operations work and develop a product plan that
   fulfills the strategy.

   Responsible: Håkan Robertsson, 2103
          VEDA: Ivan Van Eenooge 7300, Stephan De Bleecker 7300.
          VDNA: Kent Beecraft, 1068

5. Communications

   Achieve a coordination of activities regarding SNA, VCE, voice
   and video between the 3 datacenters. Topics that are included
   are responsibilities, the generations process, standards,
   operation of the network, calculation of services and
   accounting of the network.

   Responsible: Arne Hasselgren, 2202
          VEDA: Chris Vandevelde, 7200
          VDNA: Bruce Evans, 1068

6. Economy and Administration

   To define a similar way of calculating prices at the
   datacenters and define a structure for the pricelist

Issuer: 2510 LARS DANIELSSON TEL.031-667479 031-667479

Subject: GGG-projdir.   91-09-18

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to be used at the datacenters.

Responsible: Miklos Bajzath, 8010
      VEDA: Eddy Boone 07000, (Martina Verween 0710)
      VDNA: Cliff Thompson, 1068, Don Swankie, 1068

7. Quality

To define a similar quality process to be used at the
datacenters. This includes problem and change management
and reporting of availability and response times.

Responsible: Gunnar Svensson, 8015
      VEDA: Noel De Meyere 7300 for prob & change mgt
           Erik Rooms 7020 for SLR/SLA administration
           (EB & HF for defining standards of performance)
      VDNA: Ron Casey, 1068

Issuer: 2510   LARS DANIELSSON TEL.031-667479   031-667479

Subject: GGG-projdir.   91-09-18

The project is a joint project between the 3 datacenters.
Persons at Gent and Greensboro must be appointed to the
project. The task for the subprojects is to:

1. describe the present situation at the 3 datacenters,
   with focus on differences between the datacenters

2. define and agree on longterm objectives

3. to produce a product plan which describes planned
   activities next year

The next steering committe will take place early november.
Results from the sub-projects will be presented and discussed
at that meeting.

A time-schedule for the activities is to be discussed and
agreed on at the next steering meeting. The only timing
decided so far is that we shall aim for using a similar
price list 1993.

Responsible for the project is Tomas Svensson, 2500.
The project has a steering group that meets 2 times
a year. The group consists of:

Ronny Wester
Lars Aastroem
Hans Orrheim
Tomas Svensson
Eddie Boone
Clifford Thompson

Issuer: 2510   LARS DANIELSSON TEL.031-667479   031-667479

Subject: GGG-SM-projsp   91-09-18
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The GGG storage Management subproject

The GGG Storage Management subproject document is divided in the
following parts:

1. Subproject specification

2. Present situation

3. Longterm objectives.

4. Product plan.

Issuer: 2510   LARS DANIELSSON TEL.031-667479   031-667479

Subject: GGG-SM-projsp   91-09-18

Subproject specification

Background

The GGG Storage Management subproject is set up according to the
the GGG-project specification and will adhere to the same
strategical goals.

Our customers have need for similar data set services to get
ease and flexibility in exchanging data between the datacenters.

The purpose with the Storage Management subproject is to
standardize services, products and methods for operations,
technical support and data exchange and increase the
co-operation between the datacenters.

Task

1. describe the present situation at the 3 datacenters, with
   focus on differences between the datacenters

2. define and agree on longterm objectives

3. to produce a product plan wich describes planned activities
   to the end of 1992

Goals

- follow the common strategic GGG-project goals

- provide the same services for the data sets at the datacenters

- make it possible and easy for the data set owners to move data
  sets between the datacenters

- make it possible and easy for the Storage Manager to move
  clusters of data sets between the datacenters on behalf of the
  data set owners

- create rules and routines to guarantee that data sets backuped
  in purpose to be restored and used after a disaster, could be
  restored local or remote (if needed) and used in a proper way
  with no more time delay than accepted by the data set owners.

- collect and feed the accounting and statistics system with
  information by a common format

- use, with respect to local needs and differences in size of
  installation, the same rules, methods and products to perform
  the same kind of storage management routines

Personal involved

Product responsible (Product).

Issuer: 2510   LARS DANIELSSON TEL.031-667479   031-667479

Subject: GGG-SM-projsp   91-09-18

     Global responsibility concerning main technical questions,
     principles, quality goals and financial and accounting
     questions.

   Mexpack responsible (Mexpack).

     Technical responsibility to specify, manufacture and deliver
     the product.

   Operate responsible (Operate).

     Responsibility to install the mexpack delivered product and
     establish proper operation routines to run the subsystem.

   Personal.

                    VD   VEDA   VDNA
                    ------------------ ---------------- ----------------
   Storage
   (general)
       Product: Hasse Wicktorin
       Operate: Hasse Wicktorin
       Mexpack: Lars Danielsson

   DFHSM
       Operate: Börje Joakimsson

   DMS
       Operate: Lars Hammar

   Accounting
       Operate: Lars Hammar

Document syntax

   GGG: common solution (reference to VD, VDNA or VEDA solution)
   xxxx-cost: investment needed (new licenses etc, in USD)
   xxxx-work: work to implement solution (estimated man days)
   xxxx-time: time to be ready (e.g. 92Q4)

               Note: xxxx = VDNA/VEDA/VD

   SMDU   Storage Management Document (user interface) (VD)
   SMDI   Storage Management Document Internal   (VD)

Areas to be investigated

   Name standard

       - Internal dats sets, i.e. used by SMS, DFHSM, etc.
       - Started tasks
       - Volumes
       - Storage groups

Issuer: 2510   LARS DANIELSSON TEL.031-667479   031-667479

Subject: GGG-SM-projsp   91-09-18

GGG: VD name standard is mandatory
VDNA-work:
VDNA-time:
VEDA-work:
VEDA-time:

User interface

    - SMS classes, UNIT, volser, etc
    - JCL, ISPF/PDF 3.2 etc
    - data set name pattern
    - special designed interfaces
    - documentation

GGG:
VD -work:
VD -time:
VDNA-work:
VDNA-time:
VEDA-work:
VEDA-time:

Data set services

    - Creation
    - Migration/Recall
    - Backup synchronous/unsynchronous
    - Compress
    - Idle space release
    - Deletion

    ...

Volume services

    - Defrag
    - Full dump
    - Install/Formatting/Vtoc/Vvds

    ...

Tools

    - DFHSM
    - DFDSS
    - DMS

    ...

Issuer: 2510   LARS DANIELSSON TEL.031-667479   031-667479

Subject: GGG-SM-projsp   91-09-18

Present situation.

A description of the present situation at the 3 datacenters with focus on
differences between the datacenters

Present situation in Göteborg (VD)

Place for:

- Storage Management Document (user interface)

- Storage Management Document Internal

- Differences from an estimated GGG-solution

Present situation in Gent (VEDA)

Place for:

...

Present situation in Greensboro (VDNA)

Place for:

...

Issuer: 2510   LARS DANIELSSON TEL.031-667479   031-667479

Subject: GGG-SM-projsp   91-09-18

Longterm objectives.
====================

Product plan.
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   - A product plan, including activities until end 1992, that
     leads to standardized storage management at the 3
     datacenters with respect to local needs and differences in
     size of installation

Issuer: 2510   LARS DANIELSSON TEL.031-667479   031-667479

Subject: GGG-möte   91-09-18

Project GGG, subproject DBDC

This is an attempt to briefly describe the current solutions of different
areas within the CICS, IMS and DB2 environments, used at the data centers
at Gent, Greensboro and Göteborg. The objective of this list is to use it
as a base of furher discussions in order to define, within each area, the
common solution to be used at all the centers in the future. This work is
to be based of the common platform and principles, eg name standard, to
be defined in another subproject within the GGG project.

The last, and obvious the longest step to take, is the real implementation
of the common solutions at each data center. One important part of this
is the specification, manufacturing, deliverance and implementation of the
MEXPACK package for the three DBDC products.

The primary choise of solution within each area, is the one currently
implemented in Göteborg. HOWEVER, different implementations at Gent or
Greensboro are to be considered as a possible solution, should it be
the best common one.

Further details about the DBDC systems at VD in Göteborg are to be found
in the operating handbooks for CICS, DB2 (both not yet complete) and IMS.

The list of areas to begin with is the one following for IMS.
A similar list should be produced also for DB2 and CICS.

Each point of interest should include description, current use in Göteborg,
program products included, and main differences in Gent and Greensboro.
Later to be described is the common solution, the costs and work to be
done to achieve this, as well as a time plan, for each data center.

Issuer: 2510 LARS DANIELSSON TEL.031-667479 031-667479

Subject: GGG-möte 91-09-18

GGG: DBDC products, personal involved
==

At VD the following responsibles take part in the subproject:

Product responsible

Overarching responsibility concerning main technical questions, principles,
quality goals, and financial and accounting questions.
Takes part in GGG main project meetings.
Supplies information to other persons involved in subproject.

MEXPACK responsible

Techical responsibility to specify, manufacture and deliver the product
in proper MEXPACK package.

Operate responsible

Responsibility to install MEXPACK delivered product and establish proper
operation routines to run the subsystem.

CICS	VD	VEDA	VDNA
Product:	Bo Andersson		Lynn Delacour
MEXPACK:	Anders Jonsson		Steve Morono
Operate:	Tore Lantz		-"-

DB2	VD	VEDA	VDNA
Product:	Perry Lundqvist	Hubert Francet	Lynn Delacour
MEXPACK:	Eva Falk	Willy van der Bunde	-"-
Operate:	Eddy Carlsson	-"-	-"-

IMS	VD	VEDA	VDNA
Product:	Perry Lundqvist	Hubert Francet	Lynn Delacour
MEXPACK:	Vesna Stauber	Geert van de Steen	David Nields
Operate:	Anders Öhrnberg	-"-	-"-

GGG: DBDC document syntax
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Each area of interest is to be described such as:

n. Area headline
   a. function/routine headline
      DESC: detail description (if needed)
      VD: current solution in Göteborg
      DOC: detail description (handbook section)
      VDNA: current solution in Greensboro
      VEDA: current solution in Gent
      INV: investigation to be done

      GGG: common solution (reference to VD, VDNA or VEDA solution)
      VDNA/cost: investment needed (new licenses etc, in USD)
      VDNA/work: work to implement solution (estimated man days)
      VDNA/time: time to be ready (e.g. 92Q4)
      and corresponding for VEDA (or VD) ...

Other shortenings used

    CICOH/DB2OH/IMSOH = CICS/DB2/IMS Operation Handbook (at VD)
    CICMH/DB2MH/IMSMH = CICS/DB2/IMS Method Handbook (at VD)

Issuer: 2510   LARS DANIELSSON TEL.031-667479   031-667479

Subject: GGG-möte   91-09-18

GGG: IMS areas to be investigated

0. Name standard

   DESC: Includes name standard for
            - system
            - internal resources
            - data sets
            - connections (USS/MSC names)

   VD: As described in Appendix A
   DOC: IMSOH 2.0
   GGG: VD name standard is mandatory
   VDNA/work:
   VDNA/time:
   VEDA/work:
   VEDA/time:

1. Resource definitions   (GENI, DELTAIMS)

2. Resources

   - change   (ONLCHA)
   - stop/start   (VINFO)
   - allocations   (DYNALLOC)
   - backup/recovery   (DBRC)
   - library backup/compress   (PDS MAINT)

3. Automated operations

   - STC and job scheduling   (PROPER,IMF,OPC)
   - start/stop/restart
   - log handling
   - RECON handling

4. User exits and modifications

   - IMS exits
   - SMF exits
   - USERMOD's

5. User tools

   - application development   (ADF, IEF)
   - application testing   (BTS)
   - IMS commands   (VCMD)
   - batch utilities   (BMC+IMS)
   - online utilities   (DBMS)

6. Problems

   - automated actions/reporting   (IMF, NETVIEW, MEMO)
   - offline dump processing
   - problem reports   (INFO/MAN)
   - problem solving   (IPCS, INFO/MVS)
   - application actions/reporting   (IMSAOS)

7. System changes

   - manufacturing   (GENI, SMP)
   - propagating

Issuer: 2510   LARS DANIELSSON TEL.031-667479   031-667479

Subject: GGG-möte   91-09-18

      - change request   (INFO/MAN)
      - cutover
      - fallback

8. Performance and tuning

      - online monitoring   (IMF, DCMON)
      - dedicated MPP's
      - program load   (PMO, QFETCH)
      - data transmission   (SUPEROPTIMIZER)

9. Accounting & statistics

      - accounting principles
      - PU algoritm
      - creating data   (ARCHIVE)
      - keeping data   (MICS, QBAS)
      - reports

10. Security

      - logon
      - resource rules   (ACF2)
      - IMS commands   (SMU, VCMD)

11. Disaster recovery

      - documentation
      - recovery way
      - application recovery
      - application move

12. MEXPACK

      - specification
      - manufacturing
      - deliverance
      - implementation

          - end of GGG/DBDC subproject desription -

Issuer: 2510   LARS DANIELSSON TEL.031-667479   031-667479

Subject: GGG-projspec   91-08-26

```
--- Received from VD.TS   667790                        91-08-23 13.55
    -> VD.8015GS           GUNNAR SVENSSON                        8015
    -> VD.HAS              ARNE HASSELGREN                        2202
    -> VD.BC               BERT CHRISTENSSON    031-667506  2520
    -> VD.INGE             INGE FORSBERG                          2510
    -> VD.PPL              PERRY LUNDQVIST                        2540
    -> VD.LD               LARS DANIELSSON TEL.031-667479  2510
    -> VD.2103HR           HÅKAN ROBERTSSON     031-667130  2103
    -> VD.MIKLOS           MIKLOS BAJZATH                         8010
```

Mitt herrskap, jag har av Ronny ett uppdrag att åstadkomma
en standardisering av våra 3 datacentraler. Vi påbörjade ju
det arbetet i början på sommaren, bl a med ett besök av VDNA
och VEDa. På de mötet drog vi upp grova riktlinjer för vad som
ska göras och i vilken ordning. För att det ska bli något av
det hela arbetar jag på att formalisera aktiviterna inom ett
projekt. Ni får här ett utkast till projektspec som jag vill
att ni tänker till på.

Jag har alltså utnämnt er till delprojektledare och jag hoppas att
det inte möter några hinder. Min avsikt är att vi ska samlas
regelbundet för att diskutera och följa upp aktiviteterna. Jag har
på förslag att vi kan träffas nu på onsdag den 28:e aug kl 13-16
för att färdigställa projektspec och planera det fortsatta
arbetet och diskutera hur vi ska lägga upp arbetet. Tänk till på
specen för delprojekten, jag anser det viktigt att specen är
tydlig så att uppgift, mål och avgränsningar klart framgår.

OK med onsdag den 28:e kl 1300?

MVH/Tomas

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Subject: GGG-projspec   91-08-26
_____

Project specification for the GGG-project.
==

Volvo Data has a management responsibility not only for the
datacenter in Gothenburg but also for VEDa in Gent and VDNA
in Greensboro. Our customers have expressed a need for a
commonality between these datacenters, they have asked for
similar services and they need a flexibility in exchanging
data between the datacenters.

In order to satisfy our customer needs and achieve rationality
and more efficiently use our resources the GGG-project has
been started. GGG stands for Gothenburg, Gent and Greensboro.
The purpose with the project is to standardize products and
methods for operations, technical support and communications
and increase the co-operation between the datacenters.

The goals for the project are:

  - make it possible and easy to move applications and data
    between the datacenters

  - make it possible to balance load between the datacenters

  - use one datacenter as backup for another datacenter

  - make it possible to remotely operate one datacenter from
    another datacenter

  - define and agree on a common name standard

  - define and agree a common JCL

  - define and agree on a common method of calculating prices

  - define and agree on a common structure for the price lists

  (- reduce the purchasing costs by buying at the location where
    the vendors offer the best prize)

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Subject: GGG-projspec   91-08-26

The project is divided in the following subtopics:

1. MEXPACK.

   MEXPACK is the base to achieve a standardization and
   a rationalization between the datacenters. The goal is
   to build one MEXPACK-system and copy this system to the
   other MVS-environments. MEXPACK must be tailored to solve
   the needs at the 3 datacenters. MEXPACK consist of a common
   base with mandatory products and products that are optional
   depending on the installation. The MEXPACK-system must be
   defined and documented regarding products, methods and
   name-standard.

   Responsible: Inge Forsberg and Bert Christensson.

2. Database Systems.

   To develop a product plan that leads to standardized
   database systems at the 3 datacenters with respect to
   local needs and differences in size of installation.

   Responsible: Perry Lundquist.

3. Storage Management.

   To develop a product plan that leads to standardized
   storage management at the 3 datacenters with respect to
   local needs and differences in size of installation.

   Responsible: Lars Danielsson.

4. Operation and Automation.

   To define products and methods used for supervising the
   MVS-environments. Define a strategy for automation of
   the operations work and develop a product plan that
   fulfills the strategy.

   Håkan Robertsson.

5. Communications.

   Achieve a clear and well-defined SNA-coordination between the
   3 datacenters. Topics that are included are responsibilities,
   the generations process, standards, operation of the network,
   calculation of services and accounting of the network.

   Responsible: Arne Hasselgren.

8. Economy and Administration.

   To define a similar way of calculating prices at the
   datacenters and define a structure for the pricelist
   to be used at the datacenters.

   Responsible: Miklos Bajzath

9. Quality:

   To define a similar quality process to be used at the
   datacenters. This includes problem and change management

----

and reporting of availability and response times.

Responsible: Gunnar Svensson.

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Subject: GGG-projspec   91-08-26

The project is a joint project between the 3 datacenters.
The result from the sub-topics should be agreed strategies
between the datacenters and product plans that describe the
activities within the topics for the next 12 months.

Time-schedule:

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Subject: GGG minimimum   92-02-03

--- Received from VD.GUNNARSV +46(0)31-667528   92-02-01 10.28
   -> VD.2103HR   HÅKAN ROBERTSSON   031-667130 2103
cc
   -> VD.TS   TOMAS SVENSSON   2500
   -> VD.INGE   · INGE FORSBERG   2510

Hoppsan !
Kluriga GGG-aktiviteten avseende Greensboro är INFOMAN. Tomas har
lovat att ta den diskussionen med Greensboro då han är där i
slutet av februari. Då är frågan beträffande Hakan Robertsson
enl nedan. När i tiden ? Håkan ! Tomas och jag vill bli
uppdaterade.   /Gunnar Sv

--- Received from VDNA.CASEY 919-279-2639   92-01-29 16.08
   -> VD.GUNNARSV   GUNNAR SVENSSON   8015
GUNNAR,
In Greensboro we have two Info Management systems based on IBM's
Info Management. Car system uses version 1, Truck uses version 3
and mexpack is version 4. We plan to discuss our plans for future
use of version 4 for all Lpar's in Greensboro with Hakan
Robertsson. We will also discuss possibly use of the Info Mang
screens currently used in Gothenburg. Ron Casey
   -> VTC.N07020ER   ERIK ROOMS   07000
   -> VDNA.CASEY   RONALD CASEY   001068
cc
   -> VD.TS   TOMAS SVENSSON   2500

Good morning gentlemen,
Project leader Tomas wants a project plan for the Q subproject.
Ron has written in his memo GGG QUALITY
     Activities 1/
          Investigate the Q functions provided at the three
          Datacenters (GGG) and agree to minimum Q functions
          and facilities.

At the GGG meeting held in Gothenburg in June I had a agenda.
Ron and I attended that meeting. I have updated that agenda
and it is called MINIMUM OF Q FUNCTIONS as below. When Erik
comes here 3-4-5 February I will update Erik.
Many items below are only information between the three Gs.
Some critical questions:
     1. Overall Q report
        I will get in touch with Ronny Wester
     2. INFOMAN in Greensboro. What does Greensboro want ?
                                      /Gunnar Sv

Updated 920122

MINIMUM OF Q FUNCTIONS

0. Routines (CHANGE,PROBLEM, INCIDENT,...)
        To be known at each site

1. The quality chain
        Documentation, OHs

2. Quality report
        To be syncronized ?
    *   Customer feed-back
    *   Week-summary
    *   Response times
    *   Availability
    *   Network availability   (+ line definitions)

3. Q matrix
        Models used
    Personnel responsible for unavailability
    Calculation

4. The Board of Directors / overall Q reporting

5. Quality decision meetings   (May, Sept, Dec)
        Procedure
    Participants
    Agenda and minutes

6. The Q/weekly meeting
        CHANGE/PROBLEM where two(three) Gs are involved
    The planning meeting for the weekend

7. Link to capacity planning

8. Approval of equipment (impact on classification of lines)

9. Special report re. CDRMs (?)

10. INFOMAN/CHANGE/PROBLEM
        What does Greensboro want ?

11. Opening hours, time zones, maintenance windows, IPL

12. SLA
        To be syncronized ?
    * Services 1991
    * Contents
    * Confidentiality
    * Seminars
    * The network chapter

13. Vendor review meetings
        Information to other Gs ?
    Pre-meeting
    Participants
    Minutes
    Personnel responsible

14. Annual Quality Report

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Subject: GGG minimimum   92-02-03
----

15.   The QBASE project
      Quality index. To set weights/importance.

16.   Quality reporting for the future
      *   DEC, VCE, INTERLINK, EDI, PC, VCOM, AS/400, ...

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Subject: GGG-SM-projsp   91-10-01

--- Received from VD.LD   031-667479   91-09-30 18.14

Hej.

Här (bilaga nedan) är en början till min projektspecifikation.
Dokumentet kommer förhoppningsvis att att växa till sig ända fram
till slutet av november.

I dokumentet referar jag på ett ställe till "Storage Management
Document (user inteface)". Det dokumentet har Gunnel just fräschat
upp på svenska. Det skall snarast bli översatt till engelska. Jag
skeppar det till er via internposten. Oavsett GGG kan det vara bra
för er att känna till vad SM har att erbjuda. Eftersom det är en
remiss (en kort tid till) är vi tacksamma för synpunkter.

Den andra referensen "Storage Managent Document Internal" slipper
ni. Den är inte så långt kommen ännu och inte heller av samma
allmänna intresse.

 Hälsn. Lasse.

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Subject: GGG-SM-projsp   91-10-01

The GGG Storage Management subproject
=====================================

The GGG Storage Management (SM) subproject document is divided in
the following parts:

  1. GGG-SM Subproject specification

  2. GGG-SM Present situation

  3. GGG-SM Longterm objectives.

  4. GGG-SM Product plan.

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Subject: GGG-SM-projsp   91-10-01
_____

GGG-SM Subproject specification
==============================

Background

   The GGG Storage Management subproject is set up according to the
   the GGG-project specification and will adhere to the same
   strategical goals.

   Our customers have need for similar data set services to get
   ease and flexibility in exchanging data between the datacenters.

   The purpose with the Storage Management subproject is to
   standardize services, products and methods for operations,
   technical support and data exchange and increase the
   co-operation between the datacenters.

Task
----

   1. describe the present situation at the 3 datacenters, with
      focus on differences between the datacenters

   2. define and agree on longterm objectives

   3. produce a product plan wich describes planned activities
      to the end of 1992

Goals

   - follow the common strategic GGG-project goals

   - provide the same data set services

   - collect, preprocess and feed the accounting and statistics
     system with information by a common contents and format

   - provide a method to move single data sets between the
     datacenters with ease, functionality and support to current
     existing data set services (will probably be included in
     the GGG-Communications subproject)

   - provide a method to the Storage Manager to move clusters of
     data sets between the datacenters, with ease and functionality

   - use, with respect to local needs and differences in size of
     installation, the same rules, methods and products to perform
     the same kind of storage management routines

   - create rules and routines to guarantee that data sets backuped
     in purpose to be restored and used after a disaster, could be
     restored local or remote (if needed) and used in a proper way
     with no more time delay than accepted by the data set owners

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Subject: GGG-SM-projsp   91-10-01

Staff

Category description

  Product responsible (Product).

    Global responsibility concerning main technical questions,
    principles, quality goals and financial and accounting
    questions.

  Mexpack responsible (Mexpack).

    Technical responsibility to specify, manufacture and deliver
    the product.

  Operate responsible (Operate).

    Responsibility to install the mexpack delivered product and
    establish proper operation routines to run the subsystem.

	VD	VEDA	VDNA
Subproject	Lars Danielsson	Willy De Waele	Vern Chanda

Storage
(general)
    Product: Hasse Wicktorin
    Operate: Hasse Wicktorin
    Mexpack: Lars Danielsson

DFHSM
    Operate: Börje Joakimsson

DMS
    Operate: Lars Hammar

Accounting
(data coll.)
    Operate: Lars Hammar

Areas to be investigated

   Data set services (orderable and standard)

      - Creation
      - Migration/Recall
      - Backup synchronous/asynchronous
      - Compress
      - Idle space release
      - Deletion

   User interface

      - SMS classes, UNIT, volser, etc
      - JCL, ISPF/PDF 3.2 etc
      - data set name pattern
      - special designed interfaces
      - documentation

   Name standard

      - Internal data sets, i.e. used by SMS, DFHSM, etc.
      - Started tasks
      - Volumes
      - Storage groups

   Accounting

      - accounting principles
      - SRU (Space Resource Unit)
      - data collection
      - preprocessing
      - format
      - keeping data
      - statistics

   Tools (data managers, data movers, monitors, tape managers, ...)

      - DFHSM
      - DFDSS
      - DMS
      - TMS
      ...

   Exits and modifications

      - DFP exits
      - DFHSM exits
      - VAMS
      - DMS exits

   Backup

      - data set support
      - disaster recovery support
      - integration data set and disaster recovery support

   Automated operations

      - STC and job scheduling (OPC, Netview, ...)

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Subject: GGG-SM-projsp   91-10-01

    - log handling

Authorization

    - Storage Management functions
    - Storage Management's data sets

Volume services

    - Defrag
    - Full dump
    - Install/Formatting/Vtoc/Vvds
    - Treshold monitoring
    ...

Problems

    - automated actions/reporting
    - problem reports
    - problem solving

Performance and tuning

    - online monitoring

Disaster recovery

    - documentation
    - principles

Mexpack

    - specification
    - manufacturing
    - deliverance
    - implementation

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Subject: GGG-SM-projsp   91-10-01

GGG-SM Present situation
========================

    A description of the present situation at the 3 datacenters with
focus on differences between the datacenters. In purpose to give
the discussion a platform to start from, the GGG solution is
supposed to be like the VD solution.

Present situation at VD

    Refer to:

       - Storage Management Document (user interface)

       - Storage Management Document Internal

VD differences compared to the GGG-solution

    ...

Present situation at VDNA

    ...

VDNA differences compared to the GGG-solution

    ...

Present situation at VEDA

    ...

VEDA differences compared to the GGG-solution

    ...

GGG-SM Longterm objectives
==========================

Common dataset services

  1. Mandatory support for
        storage class   STANDARD
     and
        management class NOBACKUP
                          BACKUP1
                          BACKUP7
                          BACKUPC
                          DEL2
                          PROFILE
     and there corresponding services as at VD-installation.

  3. Common solution concerning other services and their
     corresponding SMS-classes (or other user-inteface)

     - Some other classes are already used for storage management
       internal business at VD and could be a platform for further
       discussions.

     - there are need for new classes to support service that are
       provided today in VEDA/VDNA/VD which doesn't fit in any of
       the mandatory SMS-classes

     - some installation unique services used only local could
       be defined as local and not implemented in the other
       installations

     - the following services (initial mandatory services
       excluded) will be used common
       .
       .
       .
       .

  4. ...

  5. ...

      ...

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Subject: GGG-SM-projsp   91-10-01

GGG-SM Product plan
===================

    A product plan, including activities until end 1992, that leads
to standardized storage management at the 3 datacenters with
respect to local needs and differences in size of installation

Activities
----

   1. Investigate the today provided services at each installation

      - define each provided dataset service

      - find a method to convert each specific service to, if
        possible, one of the corresponding mandatory services
        without, or as little as possible, demand for user
        activities

      - decide what to do with other services. Convert to new
        defined SMS services, keep as they are or ...

     VD   -work:
     VD   -time:
     VDNA-work:
     VDNA-time:
     VEDA-work:
     VEDA-time:

   2. Support for SMS classes and their corresponding services

      - define storage groups

      - create proper SMS constructs and ACS routines

      - customize DFHSM or FDR if needed

      - inform and educate the users

      - change the ACS routines step by step where each new step
        selects one more type of new allocations until all types of
        allocations are trapped and directed to SMS

     VD   -work:
     VD   -time:
     VDNA-work:
     VDNA-time:
     VEDA-work:
     VEDA-time:

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Subject: GGG-SM-projsp   91-10-01

-> VD.TS	TOMAS SVENSSON		2500
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-> VD.2103HR	HÅKAN ROBERTSSON	031-667130	2103
-> VD.HAS	ARNE HASSELGREN		2202
-> VD.MIKLOS	MIKLOS BAJZATH		8010
-> VD.GUNNARSV	GUNNAR SVENSSON		8015
-> VD.HH	HENRIK HOLST		2502

Issuer: 2202   ARNE HASSELGREN   031-667644

Subject: GGG proj 5   *Com*   91-10-07
_____

--- Received from VD.HAS   031-667644   91-10-07 08.42
--- Received from VD.HAS   031-667644   91-10-07 08.41
Hej.
Som ni kanske vet så har jag fått ett uppdrag att hålla ihop 2200
GGG (Gent Greensboro Göteborg) aktiviteter så att vi kan få
datacentralerna att i största möjliga utsträckning att se lika ut,
m.a.p produkutbud och prisstruktur. Vi har fått 10 mw för 1992.
Hur mycket vi kan jobba med detta under 1991 vet jag inte men ni
som kommer att jobba i projekt kan rapportera eran tid på 092507.
Ni får gärna ha synpunkter på innehåll och stavfel. Ronny skall
träffa Cliff Thomson och Eddy Boone i slutet av november och då
skall projektspecen vara klar.
/arne

The GGG Communication subproject
================================

The GGG Communication (COM) subproject document is divided in
the following parts:

  1. GGG-COM Subproject specification

  2. GGG-COM Present situation

  3. GGG-COM Longterm objectives

  4. GGG-COM Product plan

Issuer: 2202   ARNE HASSELGREN   031-667644

Subject: GGG proj 5   91-10-07

GGG-COM Subproject specification

Background

The GGG COM subproject is set up according to the
the GGG-project specification and will adhere to the same
strategical goals.

Our customers have need for similar price stucture so they
ease can compare prices when moving application between
dataceters. Our customer also have need for a similar
logon to all Volvo application round the world.

The purpose with the Communication subproject is to
standardize services, products and methods for Sna, Voice, Vce
and Video communications.

Task

1. describe the present situation at the 3 datacenters, with
   focus on differences between the datacenters

2. define and agree on longterm objectives

3. produce a product plan wich describes planned activities
   to the end of 1992

Goals

- follow the common strategic GGG-project goals

- provide the same data communication services

- provide same prices structure in comminication area

- provide a Sna enviroment so people can logon to application
  in same way from any datacenter.

- provide same metod for measure quality in the network

- provide accounting tools in Tpreg

- provide an ncpgeneration enviromet so all Ncpgens can be done
  from Tpreg

- use Help for documentaion of network, applications and other
  useful network information

- provide same Voice communications services and same price
  structure for pricelist 1993.

- agree on a common developing plan for Voice communication

- provide same Vce services and same price structure for
  pricelist 1993.

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Subject: GGG proj 5   91-10-07

- agree on a common developing plan for Vce

- provide same Video services and same price structure for
  pricelist 1993.

- agree on a common developing plan for Video

Issuer: 2202 ARNE HASSELGREN 031-667644

Subject: GGG proj 5   91-10-07

Staff

Category description

  Product responsible (Product).

    Global responsibility concerning main technical questions,
    principles, quality goals and financial and accounting
    questions.

  Mexpack responsible (Mexpack).

    Technical responsibility to specify, manufacture and deliver
    the product. ·

  Operate responsible (Operate).

    Responsibility to install the mexpack delivered product and
    establish proper operation routines to run the subsystem.

Subproject	VD	VEDA	VDNA
SNA	Arne Hasselgren	Cris Vandervelde	Brewster Evans
Product:	Åke Lindmark		
Operate:	Bengt Rydberg		
Mexpack:			
VOICE	Hasse Oom		Bobby Ericson
Product:	Hasse Oom		
Operate:	Hasse Oom		
VCE	Martin Särnberger		Bobby Ericson
Product:	Martin Särnberger		
Operate:	Bengt Rydberg		
VIDEO	Göran Johansson		Bobby Ericson
Product:	?		
Operate:	?		

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Subject:　GGG proj 5　　　　　　　　　　　91-10-07
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Areas to be investigated

Can VDNA use VD as Bacupcenter

Name standard

- Agree on a new Sna component list

Accounting

- accounting principles
- technic

Tools

- Help
- Vmf
- Tpreg
- Ncp gen

Problems

- problem reports
- problem solving

Issuer: 2202   ARNE HASSELGREN   031-667644

Subject: GGG proj 5   91-10-07

GGG-Com Present situation

A description of the present situation at the 3 datacenters with
focus on differences between the datacenters. In purpose to give
the discussion a platform to start from, the GGG solution is
supposed to be like the VD solution.

Present situation.

Below is a short way to discribe the differns in GGG.

Task	VD	VEDA	VDNA
Use Vmf for qualiti	Yes	Yes	No
Use Help for TP info	Yes	Yes	No
Use Tpreg for Ncpgen	Yes	Yes	No
Use Tpreg for accounting	Yes	No	No
Gen of NCP	2230	2230	VDNA
Gen of Modetabels	2230	2230	VDNA
Gen of Pathtabels	2230	2230	2230
Gen of Costabels	2230	2230	2230
Gen of USStabels	2230	2230	VDNA
Product calulation	2230	VEDA	VDNA
Maint of NCP	2230	2230	VDNA
New NCP releases/version	2230	2230	VDNA
Maint of Vtam	2510	2510	VDNA
New Vtam releases/version	2510	2510	VDNA
Name standards	2230	2230	VDNA
Production of new NCP	2110	VEDA	VDNA
Voice price structure	VD	VEDA	VDNA
Voice product development	VD	VEDA	VDNA
Vce price structure	VD	VEDA	VDNA
Vce product development	VD	VEDA	VDNA
Video price structure	VD	VEDA	VDNA
Video product development	VD	VEDA	VDNA

Present situation at VDNA

. . .

VDNA differences compared to the GGG-solution

. . .

Present situation at VEDA

. . .

VEDA differences compared to the GGG-solution

. . .

VOLVO

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PAGE: 7
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Subject: GGG proj 5   91-10-07

GGG-Com Longterm objectives

Common datacommunication services within GGG

Common datacommunication pricestructure

Common datacommunication information tools

Common datacommunication quality tools

Issuer: 2202   ARNE HASSELGREN   031-667644

Subject: GGG proj 5   91-10-07

GGG-SM Product plan
===================

A product plan, including activities until end 1992, that leads to standardized communications services and pricestructure, with respect to local needs and differences in size of installation

Activities
----

1. Investigate the today provided services at each installation

   VD   -work:
   VD   -time:

   VDNA-work:
   VDNA-time:

   VEDA-work:
   VEDA-time:

2. Make a pricecalculation for pricelist 1993, hade to be
   ended may 1992.

   VD   -work:
   VD   -time:

   VDNA-work:
   VDNA-time:

   VEDA-work:
   VEDA-time:

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Subject: GGG proj 5   91-10-07

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    -> VD.PPL         PERRY LUNDQVIST                   2540
    -> VD.2103HR      HÅKAN ROBERTSSON    031-667130    2103
    -> VD.HAS         ARNE HASSELGREN                   2202
    -> VD.MIKLOS      MIKLOS BAJZATH                    8010
    -> VD.GUNNARSV    GUNNAR SVENSSON                   8015
    -> VD.HH          HENRIK HOLST                      2502


cc:
    -> VD.ALL         ÅKE LINDMARK                      2230
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07600 Main Projects for 1992   07600 07300 VD-supp

1. GGG activities.	Mw	Mw	Mw
1.1. Installation of TMS.	2	3	1
1.2. Installation of OMEGAMON 2	2	2	1
1.3. Migration to SD-SM 1			
1.3.1 Installation & maint of VD-toolb	2		
1.3.2 Convertion : Pilote, training..	10		2
1.3.3 Joint develop of extensions	8		4
1.4. JCL-generator	12		5
1.5. Vinfo review	6	2	2
1.6. Logical recovery	1		1
1.7. Archiving & delete of DL1-roots	1		1
1.8. Integration of VEDa-SLR into Q-BASE	6		2
1.9. Review accounting approach	4		2
1.10 Automation - integration NETVIEW	6	25	8
1.11 MEXALETT documentation & print	?		?
1.12 INFOMAN customisation & integration	2	2	1
1.13 Toolbox for Database admin	6	1	2
SUBTOT	68	35	32

2. Mainframe operating systems domain.	07600	07300	VD-supp
2.1 Migration to 3390-blksize	1	1	
2.2 Migrate DASD to HSM-SMS	6	4	1
2.3 Define DASD-TAPE strat for the 90's	4	1	2
2.4 Review Backup & Recovery using HSM	12	4	1
2.5 Optimise ACF2-admin-environment	5		1
2.6 Exploit ESA-functions	2		1
SUBTOT	30	10	6

3. Database environment	07600	07300	VD-supp
3.1 Cooperative processing & Distr DB	20	2	3
3.2 Hot backup & recovery for critical appl	16	2	2
3.3 Review authorisation in DB2	8		2
SUBTOT	44	4	7

4. Systems development environment	07600	07300	VD-supp
4.1 Integration of IEF into VEDa-prod-env	5		1
4.2 Phase out ADF - provide environment	8		5
4.3 VCOM extensions to OS-2 and OS-400	14	3	3
4.4 Extension of EDI-telecom-applications	6	1	
SUBTOT	33	4	9

5. End-user environment on mainframe	07600	07300	VD-supp
5.1 Introduction of SESAM	2		1
5.2 Integrated EU-environment under VICS	12		3
5.3 Installation of AS V2	8		1
5.4 Migration tools for AS-DB2	4		
SUBTOT	26		5

6. PWS- & OS400-environments	07600	07300	VD-supp
6.1 Full-OEXPACK service	4	6	2
6.2 Establish OS2 Backup & DB-server-env	20		6
6.3 Upgrade of VCEM-LAN	6		
6.4 Full OS400 mexpack service	10		4
6.5 OS400 SDEV at VEDa (incl CIS-VCEM)	4	10	2
6.6 Standardise 8 CIS-environments	18		12
6.7 Consolidate C2- & ASS-prod at VEDa	6	4	1
6.8 Provide Hot BACKUP for ASS-appl	8	2	2
SUBTOT	76	22	29

TOTAL	277	75	88

VOLVO
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Conclusions.

1. All activities - except the GGG-projects - fit exactly the existing man-power capacity in 07600 for 1 year : 5 man-years devided over 10 people. Balancing the workload over the different skill-profiles donnot seem to be a problem.

2. The VD-support - except for AS400 and GGG-projects - may be considered as in normal proportion to the 07600-workload, and by that, included in the budget 1992.

3. For AS400-workload however, an extra 21-manweek-support of VD is already implied : due to importance of an allied approach for all projects. The greater part of support will be spent on mapping and standardisation of all CIS-sites. Since the activities start soon, a fast selection procedure must be applied.

4. The remaining overload is generated by GGG : estimated on 30 Mw for 07600 and 32 Mw for VD-support. It is essential that the latter 32 Mw must be supplied and planned by VD, from which 8 are related to the automation project.

5. The missing 30 Mw for 07600 can only be performed by skilled Volvo-engineers. Below an attempt / proposal to solve this...

6. The most critical domain is SD/SM-1 : the installation and conversion can be realised in 1992 only if 10 Mw of extra VD-expert-support can be delivered by dept 2800.

7. Another extra 10 Mw could be assigned to the JCL-generator.
A skilled programmer-profile with knowledge of JCL, ISPF, REXX and Data-manager is required.

8. The remaining 10 Mw may be spread over different VD-people : as the essential GGG-support was estimated on 32 Mw, it can be incresed to 42 Mw over departments 2500 and 2100 at VD.

(handwritten note top right) Kolla N, Det är det att man inte får eller om "local men ej ännu på GS"

1.0 Inputklasser

Beskrivning av klasser A-Z

Klass	Användare	Tider	Regler	3G
A	Alla	00-24	När klass saknas. Init ej aktiv.	J
B			RESERVERAD	N
C	OPC	00-24	Prodjobb utan tape prio 1,2,3	J
D	OPC	00-24	Prodjobb utan tape prio 6	J
E	Alla	00-24	Test IMS-bmp'er	J
F	21/25xx	00-24	Systemunderhåll. Archive-jobb IMS-prod	
G	OPC	00-24	Prodjobb med tape prio 1,2,3,6	J
H	VKAB	18-06	Endast VKAB	
I	Alla	00-24	Användar initierade jobb. "Direkt" I: 005 min, S: 002 Msu, A: 010 Msu, P: 4	J
J	ÅF	00-24	Volvo ÅF-kunder (uppringt)	
K			RESERVERAD	N
L	VLV	00-24	Endast LV	
M			RESERVERAD	N
N	Alla	00-24	Användar initierade jobb. "Normal" I: 020 min, S: 001 Msu, A: 003 Msu, P: 1	J
O	CAE	00-24	CAE/CADAM och plotter	J
P	Penta	00-24	Endast Penta	
Q	Alla	18-06	Användar initierade jobb. "Mycket tunga" I: --- min, S: --- Msu, A: --- Msu, P: 0.4 (Natt) I: --- min, S: --- Msu, A: --- Msu, P: 0.33 (Helg)	J
R	Parts	00-24	Endast Parts	
S	Alla	00-24	Användar initierade jobb. "Snabba" I: 005 min, S: 0.1 Msu, A: 0.3 Msu, P: 2	J
T	Alla	00-24	Användar initierade jobb. "Medel tunga" I: 240 min, S: 004 Msu, A: --- Msu, P: 0.8 (Dag) I: 240 min, S: 004 Msu, A: --- Msu, P: 0.58 (Natt)	J
U	RJE-övrigt	00-24	Prod. RJE-kunder utan egna klasser	
V	Alla	00-24	IMS-bmp'er "Hög-prio."	J
X	CICS	00-24	Online-klass Cics.	
Y	RJE	00-24	Input från RJE till V-D och Extraheringar. I: 005 min, S: --- Msu, A: --- Msu, P: ---	
Z	TADB-kunder	00-24	Spec. klass för tek. ADB. Finns bara i VK01 I: --- min, S: 030 Msu, A: --- Msu, P: 0.8	

I = Max inkötid, S = SU gräns, A = Abend gräns, P = Pris faktor.

(handwritten note at bottom) Kolla m Elisabet om ev. framtid "a la SMS" för input/output i JESS?

1.0 Outputklasser

Beskrivning av klasser

Klass	Användare	Rensas	Regler	3G
A	Alla	30 dag	STD-sysout, JCLSPLIT (Forms 1800)	J
B	Alla	30 dag	Kort	
C	Alla	30 dag	**Central printning VD.**	
D	Alla	2 dag	Dump sysout (Forms 1811)	
E	Alla	30 dag	**Central printning VD.**	
F	Alla	30 dag	Kort	
G	Alla	30 dag	STD-sysout för SASWTR, VPS grafik	
H	Alla	2 dag	**Held**	J
I	VDSYD	2 dag	Cicsprint	
J	RJE	30 dag	Special-forms	
K	RJE	30 dag	Kort	
L			RESERVERAD	
M	Alla	2 dag	**Held** output skapas endast vid abend/JCL-error	J
N			RESERVERAD	
O	SAR	30 dag	SAR internt	J
P	Alla	30 dag	VPS Plotter	
Q			RESERVERAD	
R	HSM	1 dag	HSM	
S	Alla	1 dag	**Held**	
T			RESERVERAD	
U	Alla	30 dag	Com-prod	
V	Alla	30 dag	Com-test	
X	Syslog	7 dag	Test (SU)	
Y	Syslog	7 dag	Prod	J
0	Alla		Ingen output skapas	J
1			RESERVERAD	
2			RESERVERAD	
3			RESERVERAD	
4			RESERVERAD	
5			RESERVERAD	
6			RESERVERAD	
7	RMO	30 dag	RMO internt.	J
8	Alla	30 dag	VPS-sysouter över printer limit	
9	2130	30 dag	2130	

The GGG Subproject 'Access Control'

REVISION DATE: 911120

DOCUMENT STRUCTURE

Part I: Common terminology, background and subproject
           specification.
Part II: Present situation
Part III: Long term objectives
Part IV: Plan for 1992

PROJECT SCOPE

This subproject is named Access Control, not Security.

Security is a wider term, usually also including topics like
fire protection, disaster planning, physical access
restrictions etc.

This project is not intended to cover these areas, but if
a topic outside access control is needed to fulfil the
intensions of the GGG project, and the topic is in the
security area, it should be included as a part of this
subproject.

SUBPROJECT INTERFACES

The access control subproject of the GGG project interfaces
to most of the other subprojects. Therefore it is needed to
crossreference the other subproject documentation and resources

ACCESS CONTROL LAYERS

In todays MVS environment access control is not only ACF2!
Several components using various mechanisms form the access
control environment needed to professionaly secure our
computing resources from unauthorized access. They are
described below.

Several layers (similar to the OSI model) can be defined.
These layers does not in all cases represent a hierarchical
relationship, they should be seen as a method to group
various types of access control mechanisms in a manageable manner.

1.Processor layer

2.MVS layer

3.SAF layer

4.Application layer

5.Network layer

6. Encryption layer

7. Authentication layer

8. Audit layer

Processor layer

Access control at this layer is managing access to the
370 processor console. The console may be remote to the
processor, located at the operators desk, in the local IBM
office, or via remote maintenece port in IBM somewhere.
With the new funcions TSCF of Netview it can be almost
everywhere.

The functions performed at this console include display and
alter memory/psw affecting all operating systems executing
in this hardware.

MVS layer

The MVS layer consits of:

MVS integrity as defined in IBM integrity statement for MVS.
"... the inability of any program not authorised by a mechanism
under the users control to:
1. Circumvent or disable store and fetch protection
2. Access an OS-password or RACF protected resource
3. Obtain control in authorised state i.e. supervisor state
   protection key less than eight or APF authorised."

The MVS implementaions includes:
PSW state, Protection keys for memory, Page protection,
Address space isolation and APF authorisation.

The foundation for the SAF layer is MVS integrity. The
access control mechanisms here are control over
user extensions to MVS and "MVS functions" such as:
1. user svcs
2. APF libraries
3. system exits
4. dynamic reconfiguration utilities
5. advanced software capable of display and/or alter
   memory in common storage or other address spaces.
6. various parameter and script libraries controlling
   the behaviour and functions of MVS.
7. MVS consoles and console support
8. MVS subsystems such as JES2.
9. All other authorized files and functions.

In short this layer protects "central storage" and it must
be tamperproof.

SAF layer

The SAF layer access control is implemented by calls to SAF
using the SAF interface i.e the RACROUTE macro.
SAF calls the Access Control software installed (be it
ACF2,RACF or TSS) to answer the access request with a yes or no,
based on the rules stored in the access control database.

ACF2 also insert its own intercepts into MVS and subsystems
to provide calls directly i.e bypassing SAF when needed.

Various resources such as datasets, IMS and CICS transaction
codes and numerous "system resources" can be defined and
protected. For this protection to be manageable a naming
convention must be in place.

In short this layer protects MVS and user resources from
unauthorised access, i.e no protection from MVS layer or
authorised users at this layer.

The guideline is to use SAF layer access control whwnever
applicable.

Application layer

The application layer access control consist of functions
built into a product to enhance the products internal
security. An example is an IMS application with its own
security mechanism, or "native IBM DB2 security".

"Real user" applications with built in internal security
totally selfcontained in the application is of no interest
to the GGG project and are not discussed further.

The guideline however is to use ACF2 whenever possible also
for application unique security requirements. Products with
ACF2 security as an alternative to internal security should
use ACF2 if applicable.

In this layer some products as an option may use SAF
layer security. Examples are Netview logon security.

Several products in this area are powerful such as HSM and
Omegamon, where their internal security protects at the SAF
or MVS layer, but the security interface exist at this layer.

Many products on this layer posess powers qualifying them
for the MVS layer some just applications as in the IMS
application example desribed above.

In short this layer protects resources or functions unique to
a product regardless of MVS or SAF layer.

Network layer

Access control at the network layer identifies requirements
for SNA network entry, exit and pass through. It also
defines accress control for gateways to other non-SNA networks
and devices such as PCs PC LANs Ethernet and DECnet connections.

Special interest are for this project TCP/IP , INTERLINK , NJE
RJE connections type connections.

VCOM, FILEMON, various distributed functions in ACF2, DB2, IMS
CICS etc are existing and more will come.

Connections to non-Volvo companies for MEMO communication and
other information exchange.

Connections to governement agencis and finance institutions
such as customs as an example may require specific attention.

In short this layer protects the other layers from the outside
i.e other computers inside or outside Volvo.

Encryption layer

This layer protects agains modification or disclosure of
information stored on disk, or in transit, but not in
"cental storage" during processing.

Various methods exist for disk and communications
encryption. In the communications case also at several
layers in the OSI model.

Authentication layer

This layer is controlling that "the user is the user he
claims to be". Several methods exist from userid + password
to more elaborate smart card implementations resulting in
"one time passwords".

Audit layer

This layer does not protect, it reports access activity.
The main audit trace is MVS SMF records, but also others
exist such as console log , processor log and IMS log.

GGG ACCESS CONTROL OBJECTIVES

Access control must:

1. Look, feel and behave the same across datacenter boundaries i.e same administration, similar tools, parameters and standards.
2. Protect resources with similar "quality" ,i.e same types of controls.
3. Provide "trusted and tamperproof" nodes in our SNA network. I.e no revalidation of user identity should be needed when units of work cross datacenter boundaries.
4. Similar swecurity policy must exist.

PROJECT TASKS

1. To identify layers needed to fulfil GGG overall objectives. In these layers identify functions and products for detailed analysis in the access control area.

2. Issue guidelines, parameters etc to define a common access control platform.

3. Investigate and suggest a "name standard" for various items used in access control.

4. Establish a uniform access control administration.

5. Establish a uniform audit/reporting environment.

6. Investigate todays environment in the different datacenters

7. Identify GGG requirements on access control

8. Define and agree on longterm objectives.

9. Produce a plan desribing planned activities for 1992.

10. Define access requirements for GGG personell at each others datacenters ?

OTHER SUBPROJECT DEMANDS

GGG-Common Platform and Mexpack
To be investigated

GGG-Database Systems
To be investigated

GGG-Storage Management
To be investigated

GGG-Operation and Automation
To be investigated

GGG-Communications
To be investigated

GGG-Economy and Administration
To be investigated

GGG-Quality
To be investigated

NEW FUNCTIONS

Is there a need for account code protection ?

STAFF

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VDNA: Fay Donahue
       Dennis Joebgren
VEDA: Erik Rooms

PART II

PRESENT STATE OF ACCESS CONTROL

This part is not completed, it is used as a work document to
assemble differences between computer centers.

ACF2 SOFTWARE

	VD	VDNA	VEDA
ACF2/MVS			
ACF2/CICS			
ACF2/IMS			
ACF2/DB2			
EXAMINE	N/A	N/A	N/A
EARL	N/A	N/A (1)	N/A
Local Exits			
Funcions			
DDB			
CACHE			

Comments:
1. Installed but not used, provided by other CA product.

PROCESSOR LAYER

FUNCTION	VD	VDNA	VEDA
IBM console			
Operator Console			
REMOTE SUPPORT			
Dial out			
Dial in			
TSCF console			

MVS LAYER

VD

SAF LAYER

	VD	VDNA	VEDA
ACF2 FUNCTIONS			
ID standard			
UID standard			
SCOPE standard			
SHIFT standard			
ZONE standard			
RESOURCE GROUPS			
Terminals			
Transactions			
Operator Ids			
CFDE changes			
GSO parameters			
SYSTEM Res types			
USER Res types			

APPLICATION LAYER

NETWORK LAYER

Encryption Layer

Authentication Layer

Audit layer

Other areas
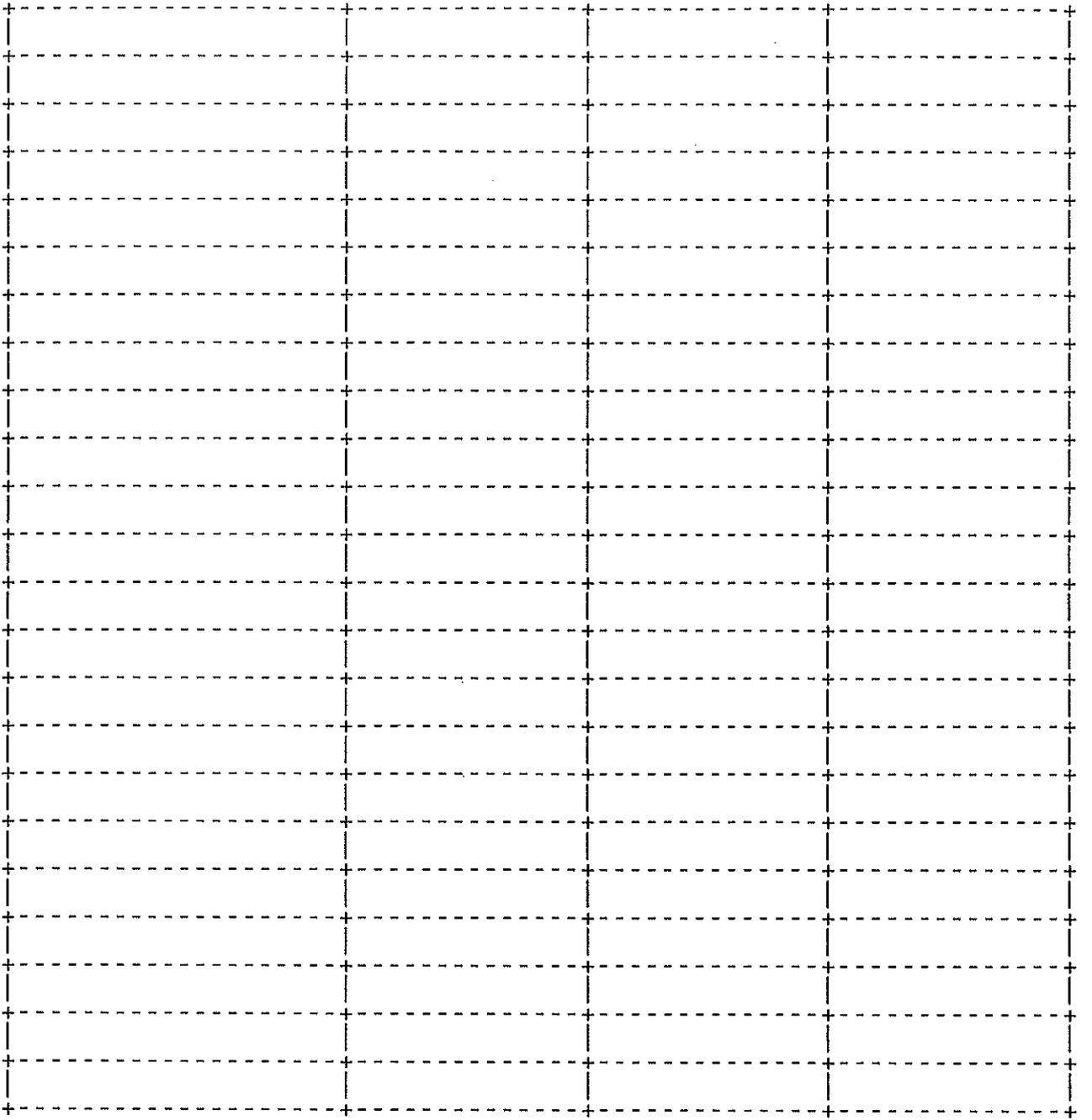
PART III

Long term objectives

To be developed

PART IV

Plan for 1992

To be developed