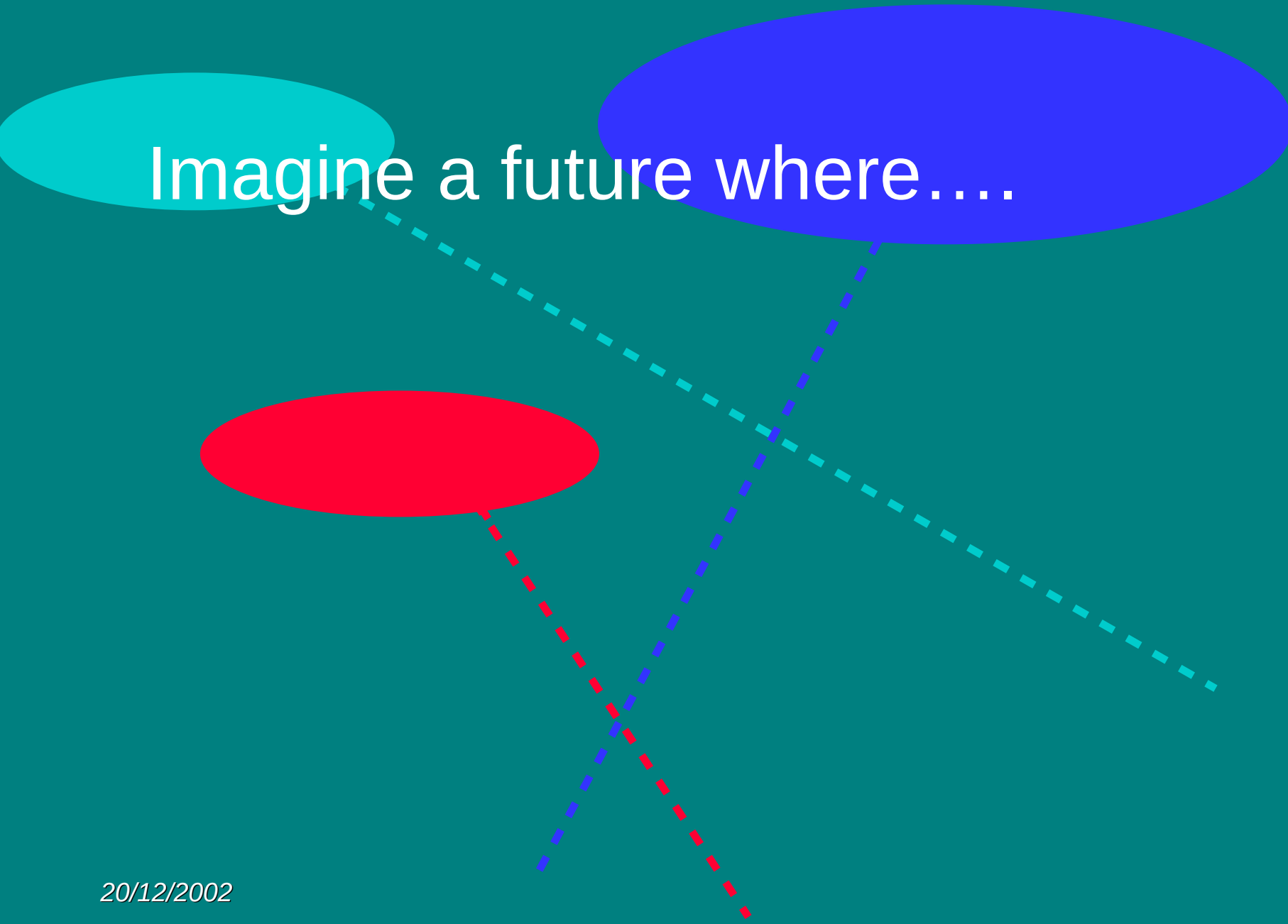
Data Collection & Remote Monitoring of Commercial Tour Operators

Colin Ingram
Matt Cavana
Park Policy and Services
CALM

20/12/2002

Imagine a future where….



Imagine a future where….

- Data on the movement of all CTO vessels & vehicles is captured and held in RATIS

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- CTO's actively support and manage their own monitoring

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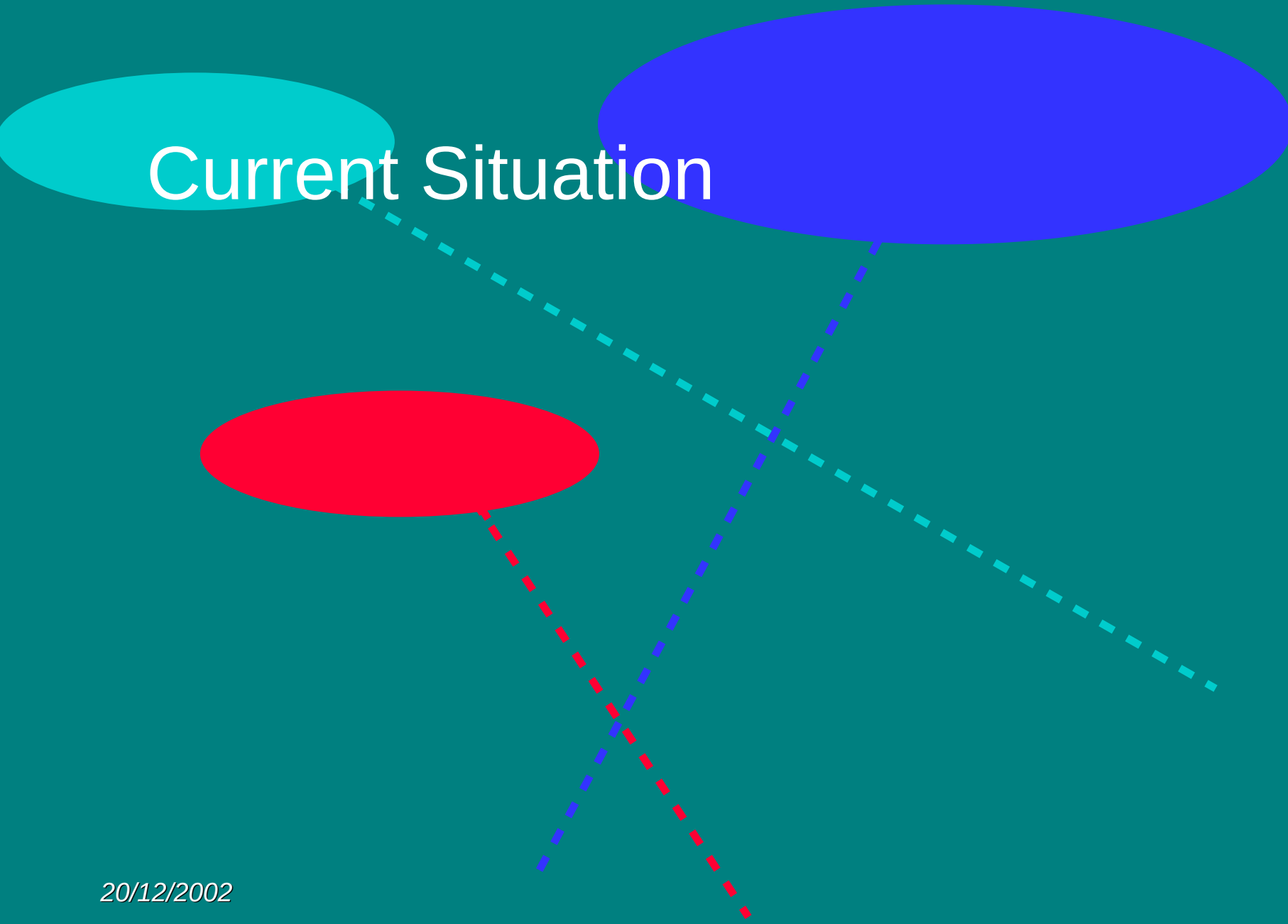
- Invoicing of CTO's park entry fees is automated.

Imagine a future where….

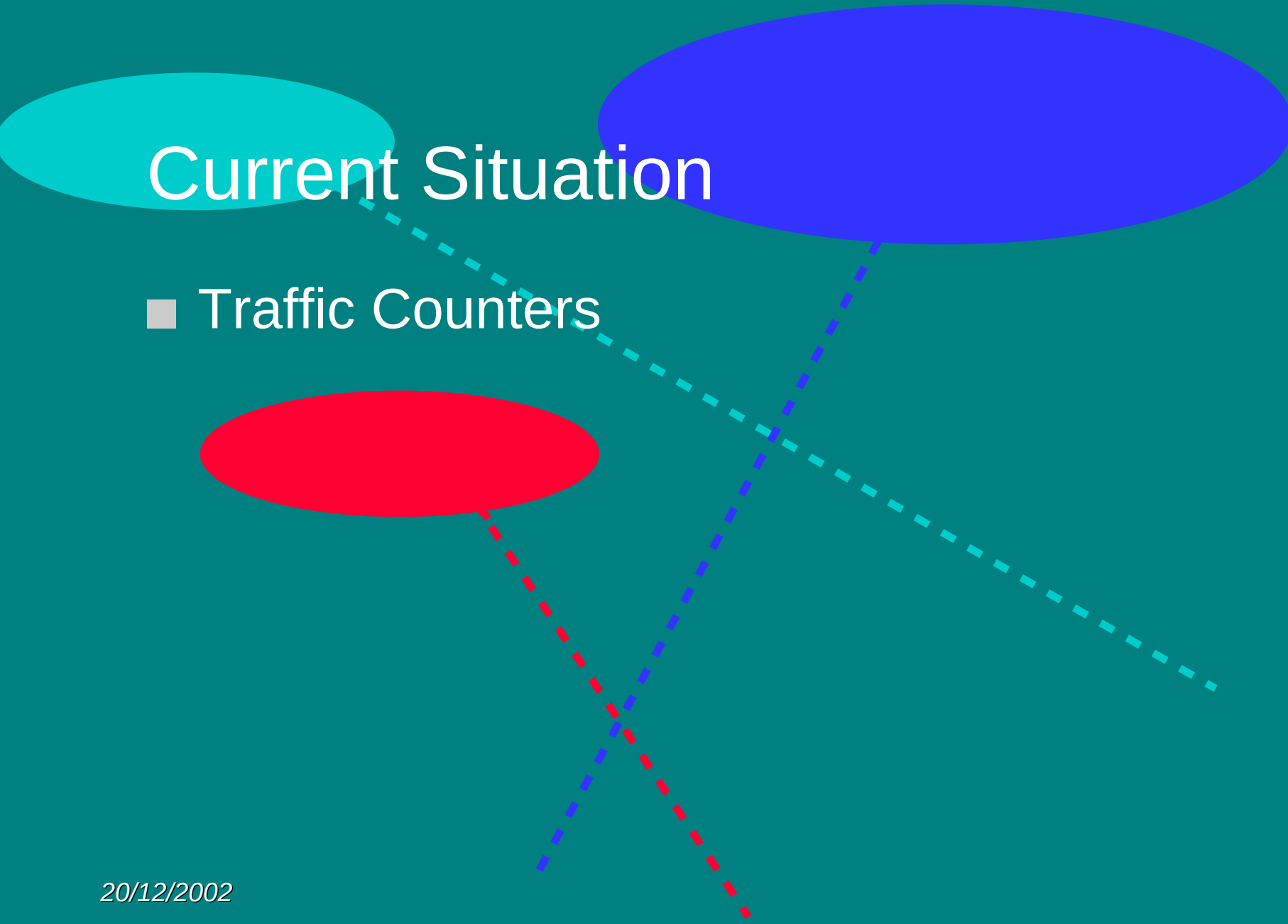
- Data on the movement of all CTO vessels & vehicles is captured and held in RATIS
- CTO's actively support and manage their own monitoring
- Invoicing of CTO's park entry fees is automated.
- Data from Metro Count modules requires no field collection

Current Situation



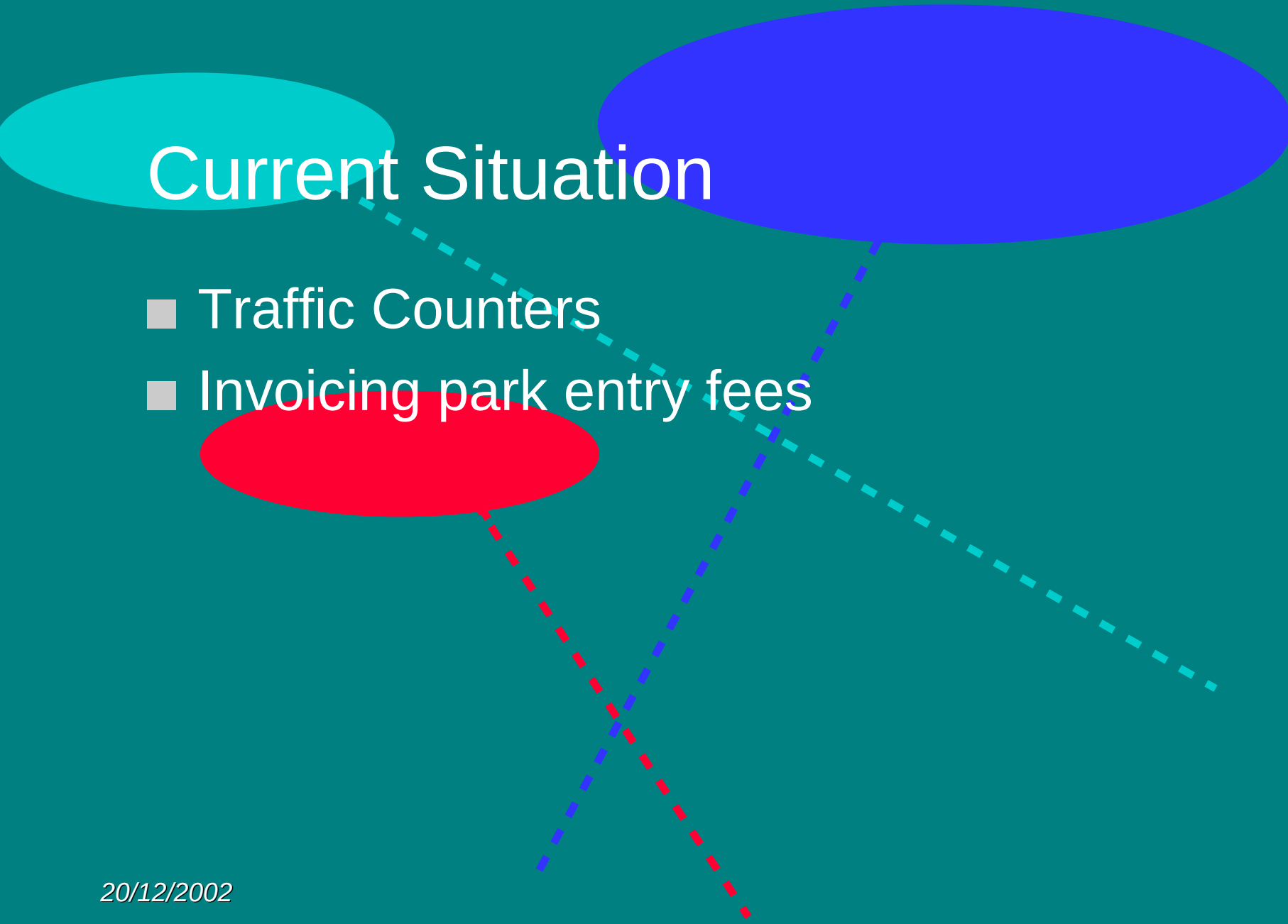
Current Situation

- Traffic Counters



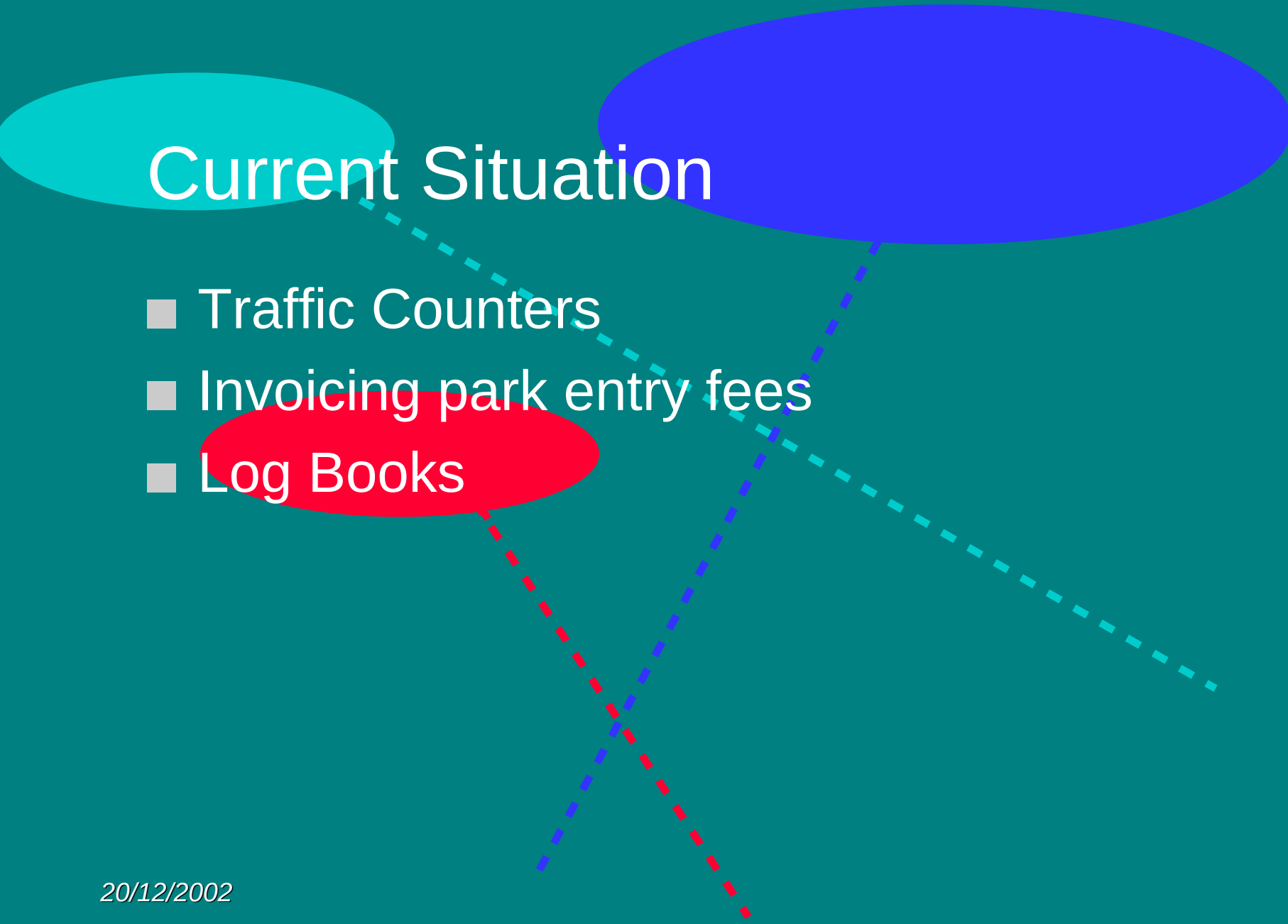
Current Situation

- Traffic Counters
- Invoicing park entry fees



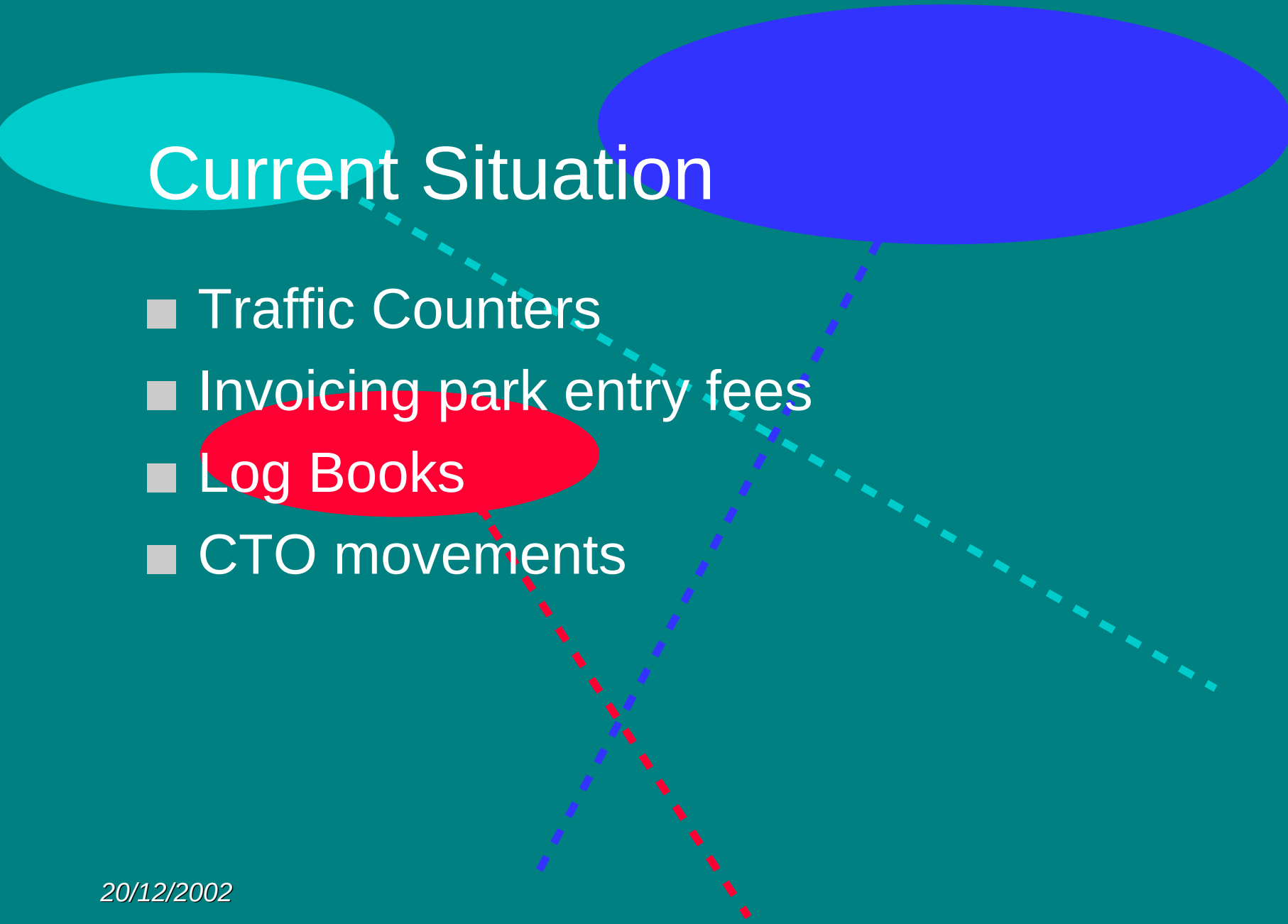
Current Situation

- Traffic Counters
- Invoicing park entry fees
- Log Books



Current Situation

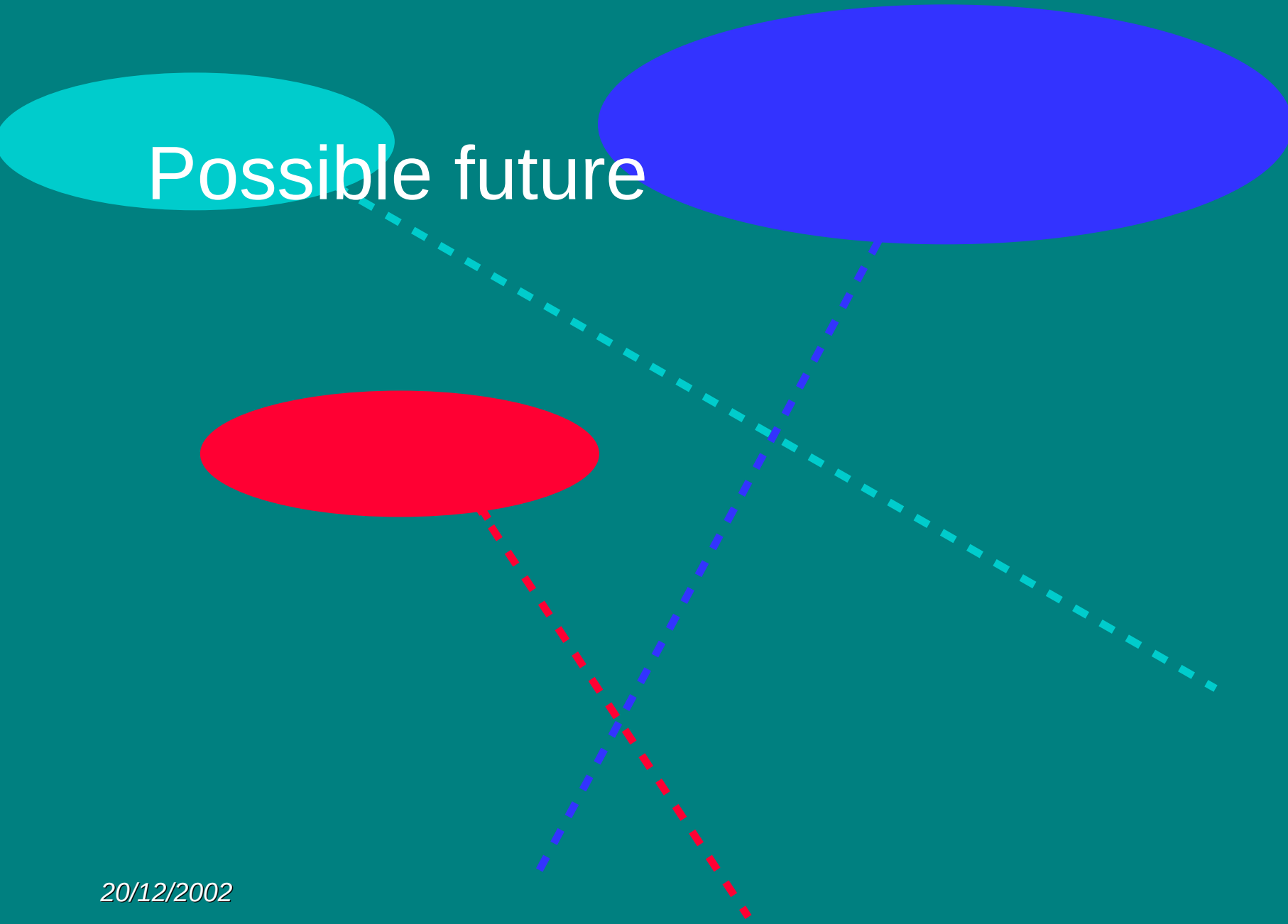
- Traffic Counters
- Invoicing park entry fees
- Log Books
- CTO movements



Current Situation

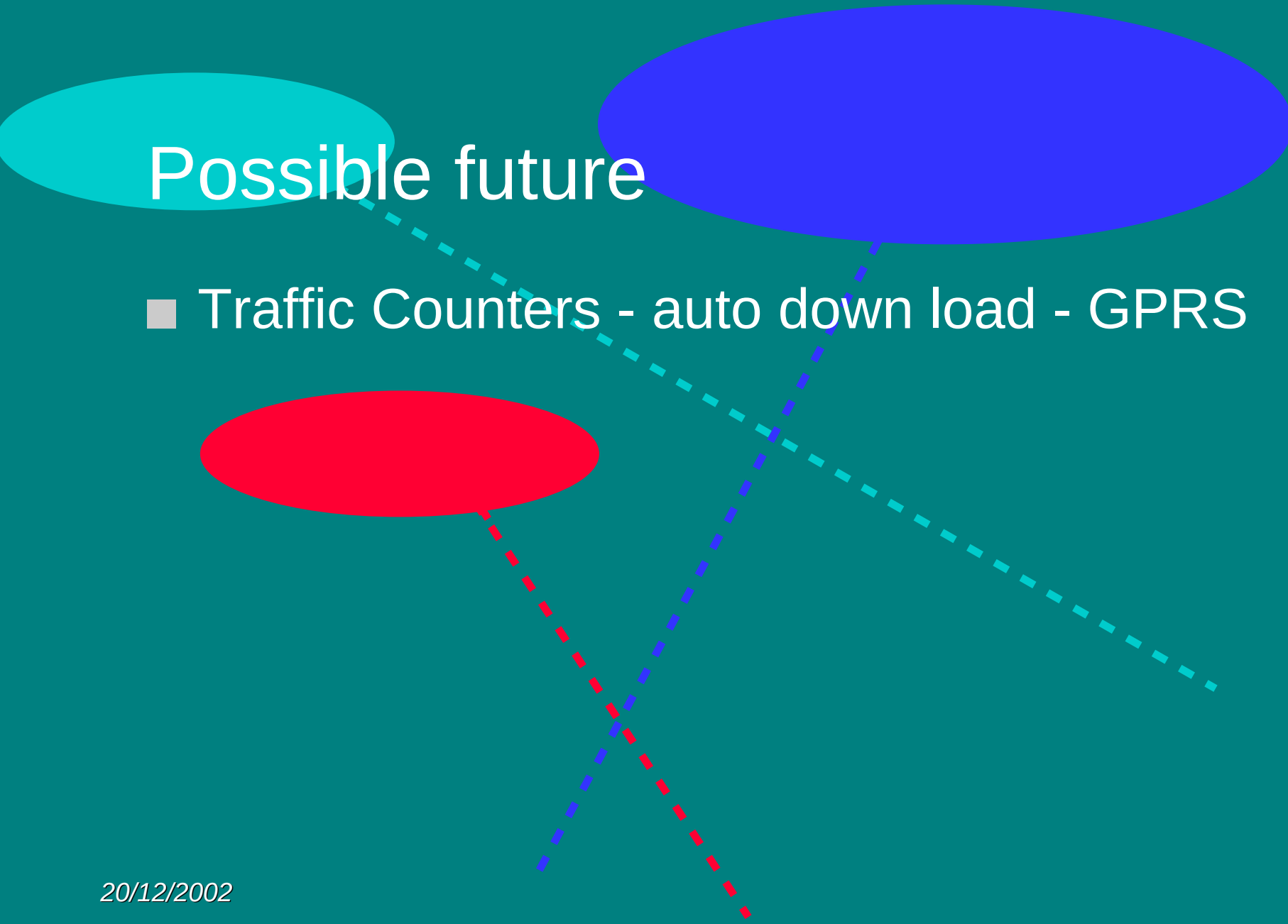
- Traffic Counters
- Invoicing park entry fees
- Log Books
- CTO movements
- CTO visitor numbers and activities

Possible future



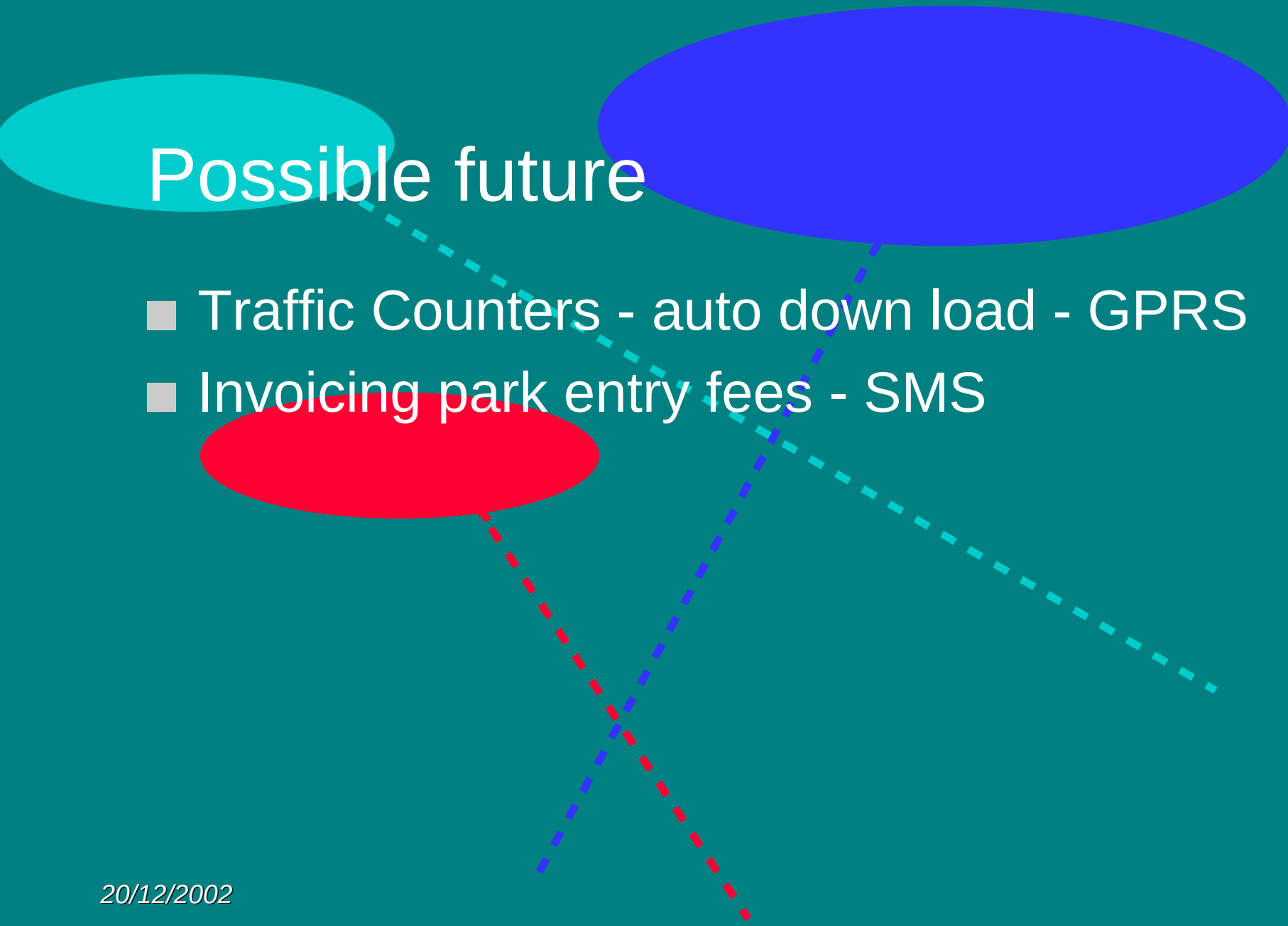
Possible future

- Traffic Counters - auto down load - GPRS



Possible future

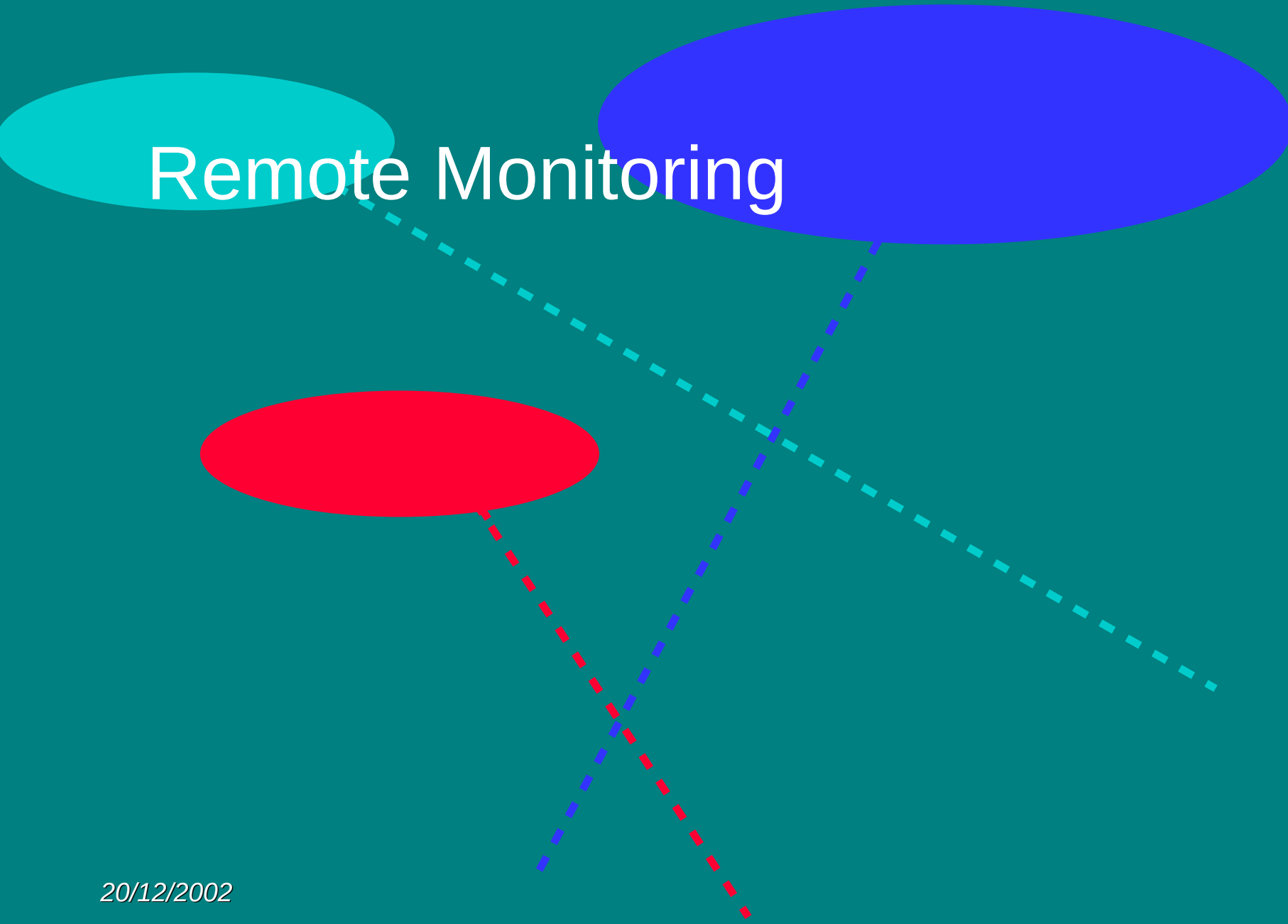
- Traffic Counters - auto down load - GPRS
- Invoicing park entry fees - SMS



Possible future

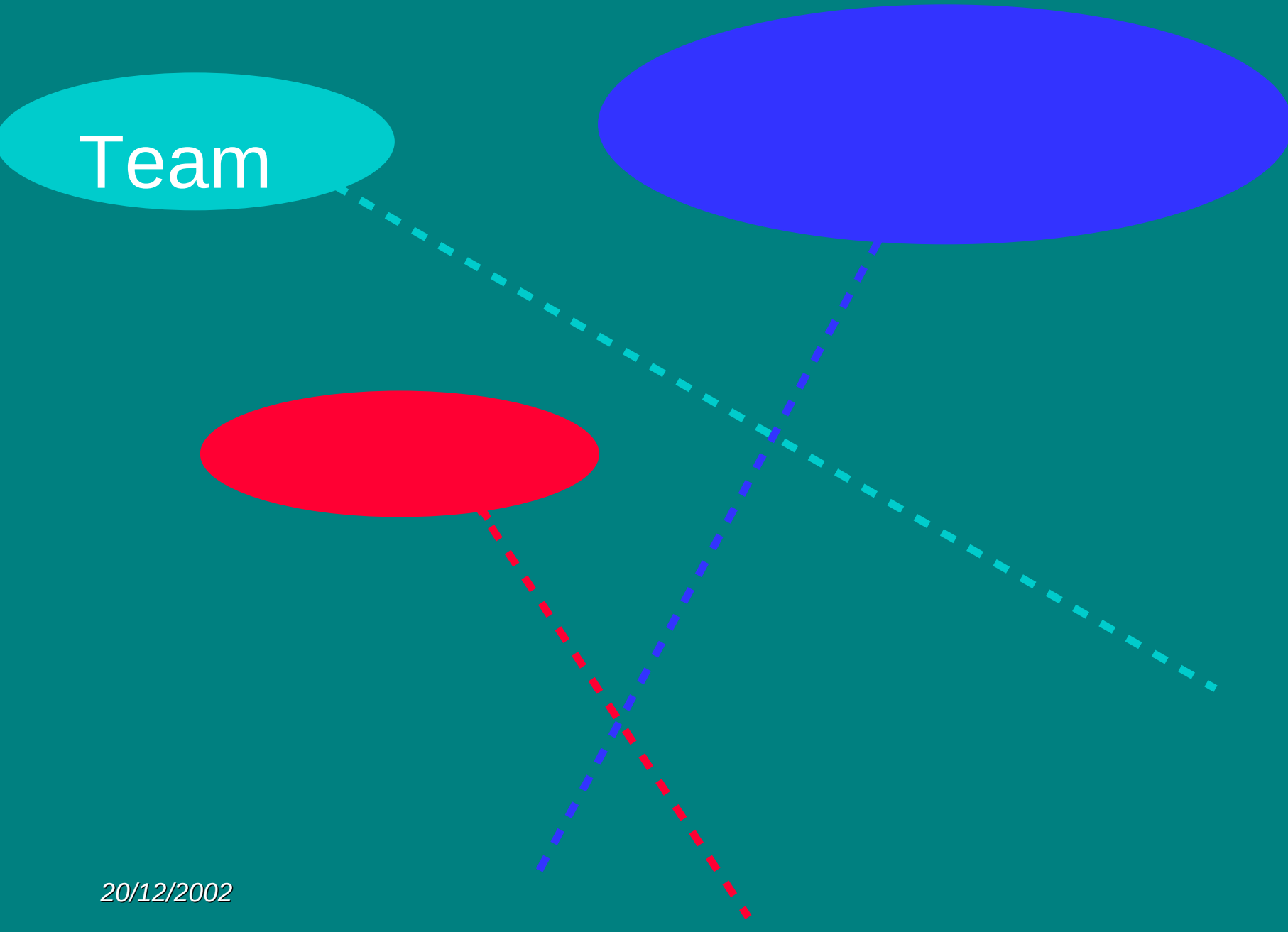
- Traffic Counters - auto down load - GPRS
- Invoicing park entry fees - SMS
- Electronic Log Books - SMS or GPRS
  - CTO movements - GIS (GSM & CDMA)
  - CTO visitor numbers and activities

Remote Monitoring



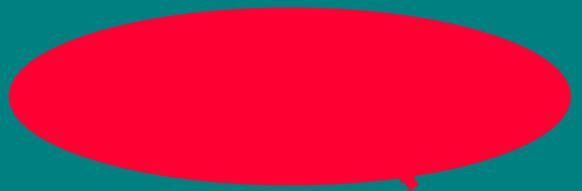
Remote Monitoring

- Driven by industry
  - competition
  - efficiency and cost savings
  - quality assurance
  - Insurance and public liability
  - customer service
  - environmental management


Team

Team

- Matt Cavana - RATIS connection



Team

- Matt Cavana - RATIS connection
- Rod Quartermain - Inter Government liaison

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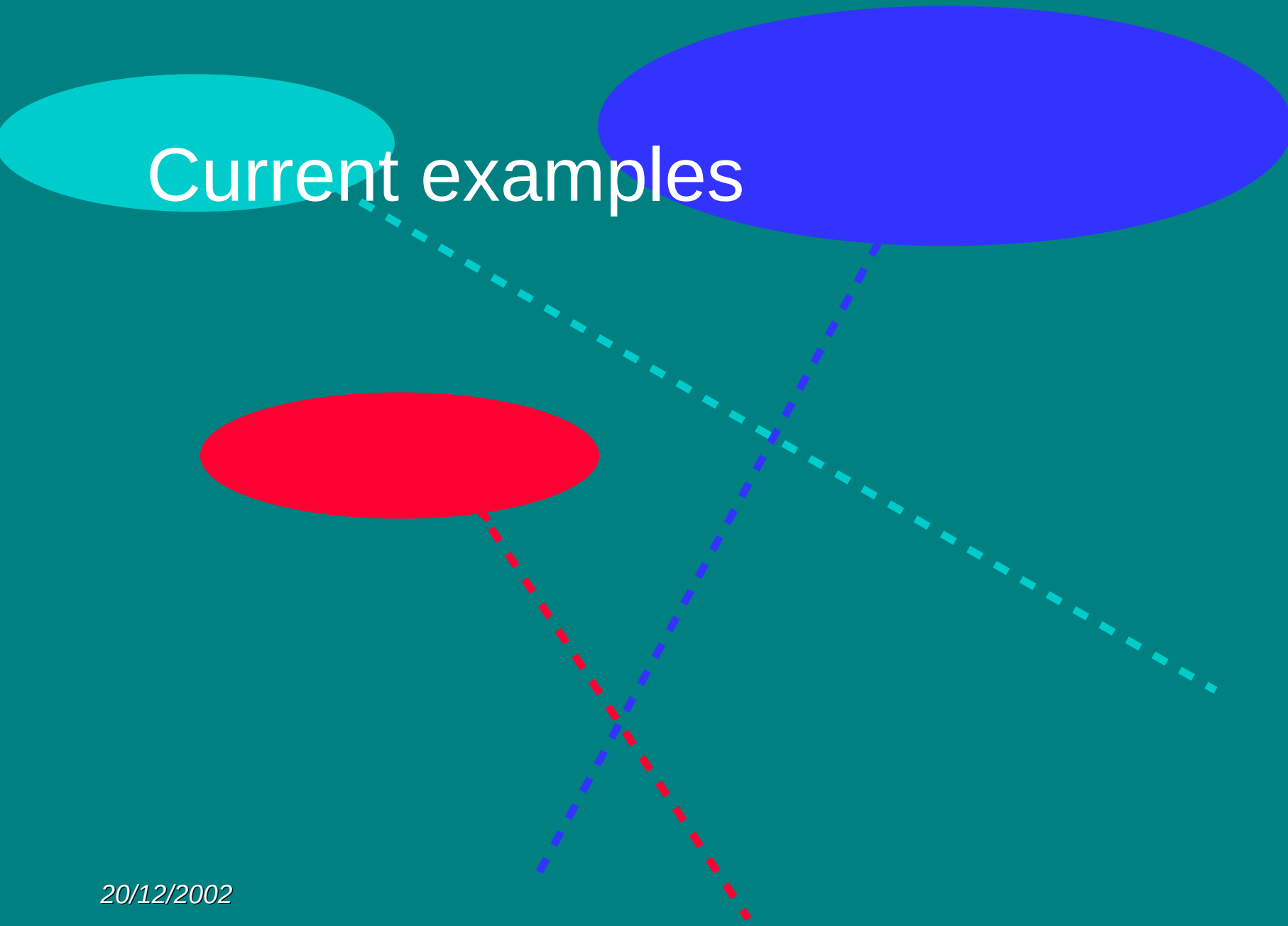
- Kate Hassall - VISTAT - Metrocount
- Peter Clifford - TerraVision
- Peter Langmead - Pocket Phone
- Colin Ingram - Coordinator

Glossary

- CDMA - **C**ode **D**ivision **M**ultiple **A**ccess
- CTO - **C**ommercial **T**our **O**perator
- ECERS - **E**lectronic **C**atch & **E**ffort **R**eporting **S**ystem
- GPRS - **G**roup **P**acket **R**adio **S**witching
- GPS - **G**lobal **P**ositioning **S**ystem
- GSM - **G**lobal **S**ystem for **M**obile communication
- PDA - **P**ersonal **D**igital **A**ssistant
- RATIS - **R**ecreation and **T**ourism **I**nformation **S**ystem
- SMS - **S**hort **M**essage **S**ervice
- TOMS - **T**our **O**perator **M**onitoring **S**ystem

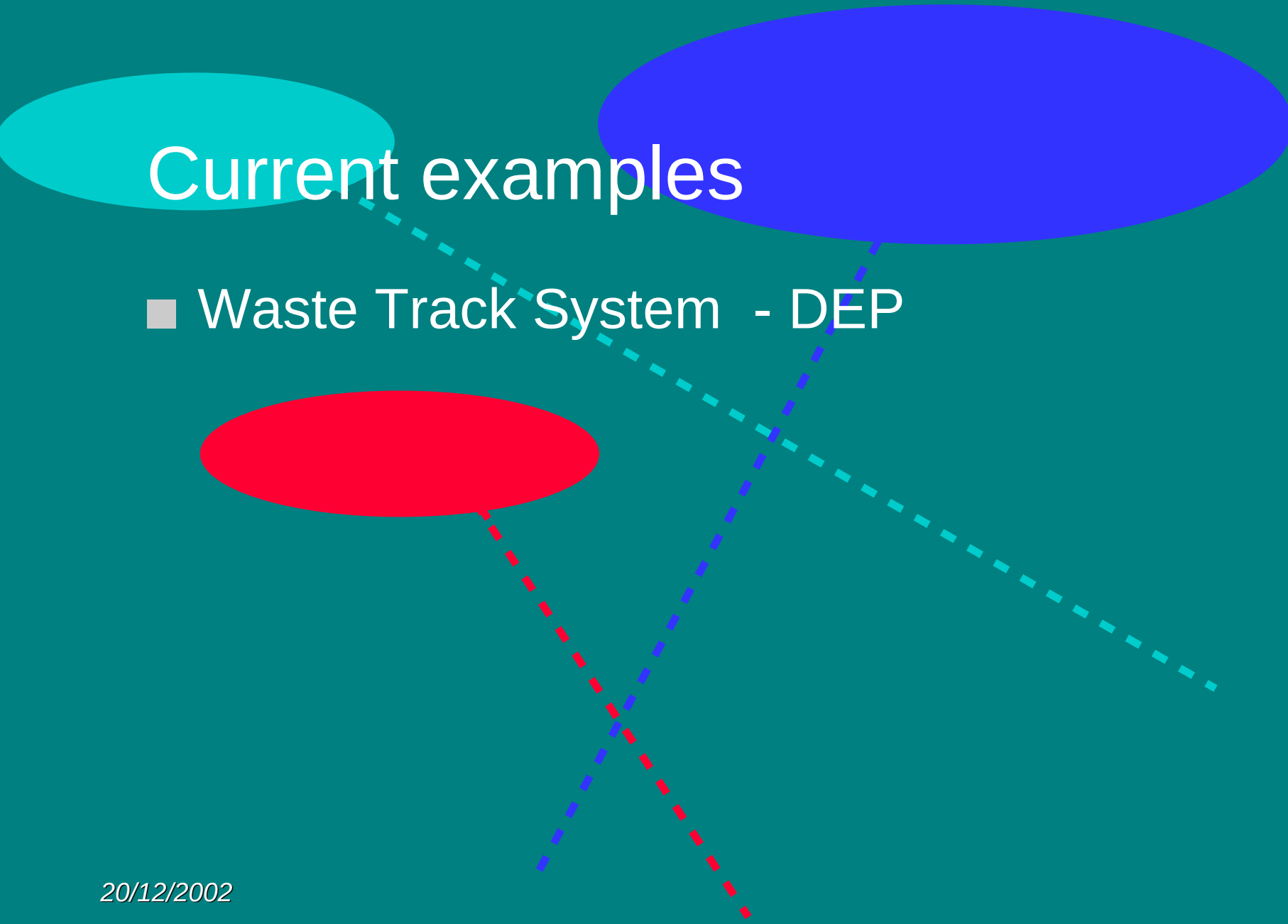

Satellite
ECERS Sent
Via INMARSAT
Fishing
Vessel
Office/Home
System
ECERS Sent
Through Email
Via Internet
LES
SatLink
Gateway
Fisheries
Department
System

Current examples



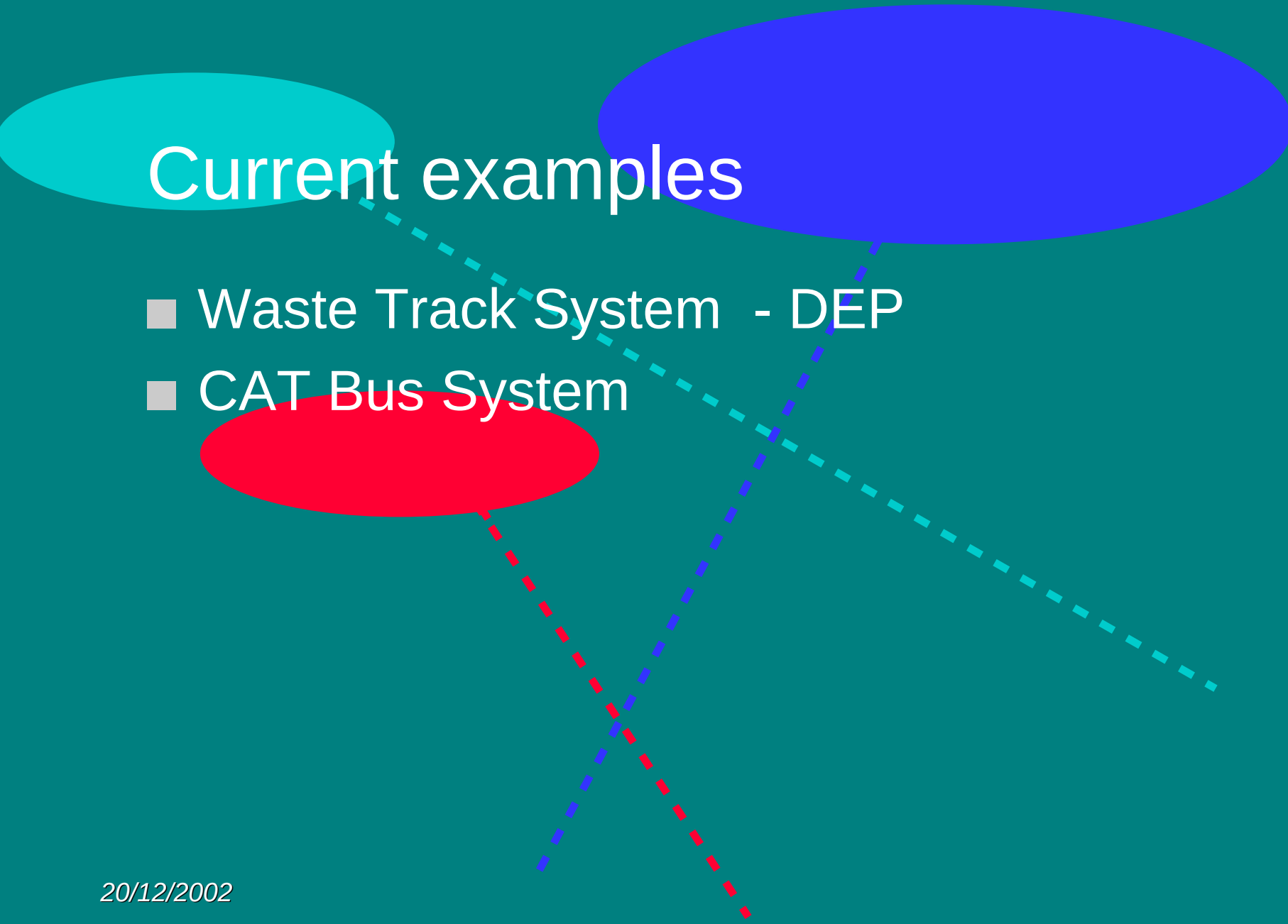
Current examples

- Waste Track System - DEP



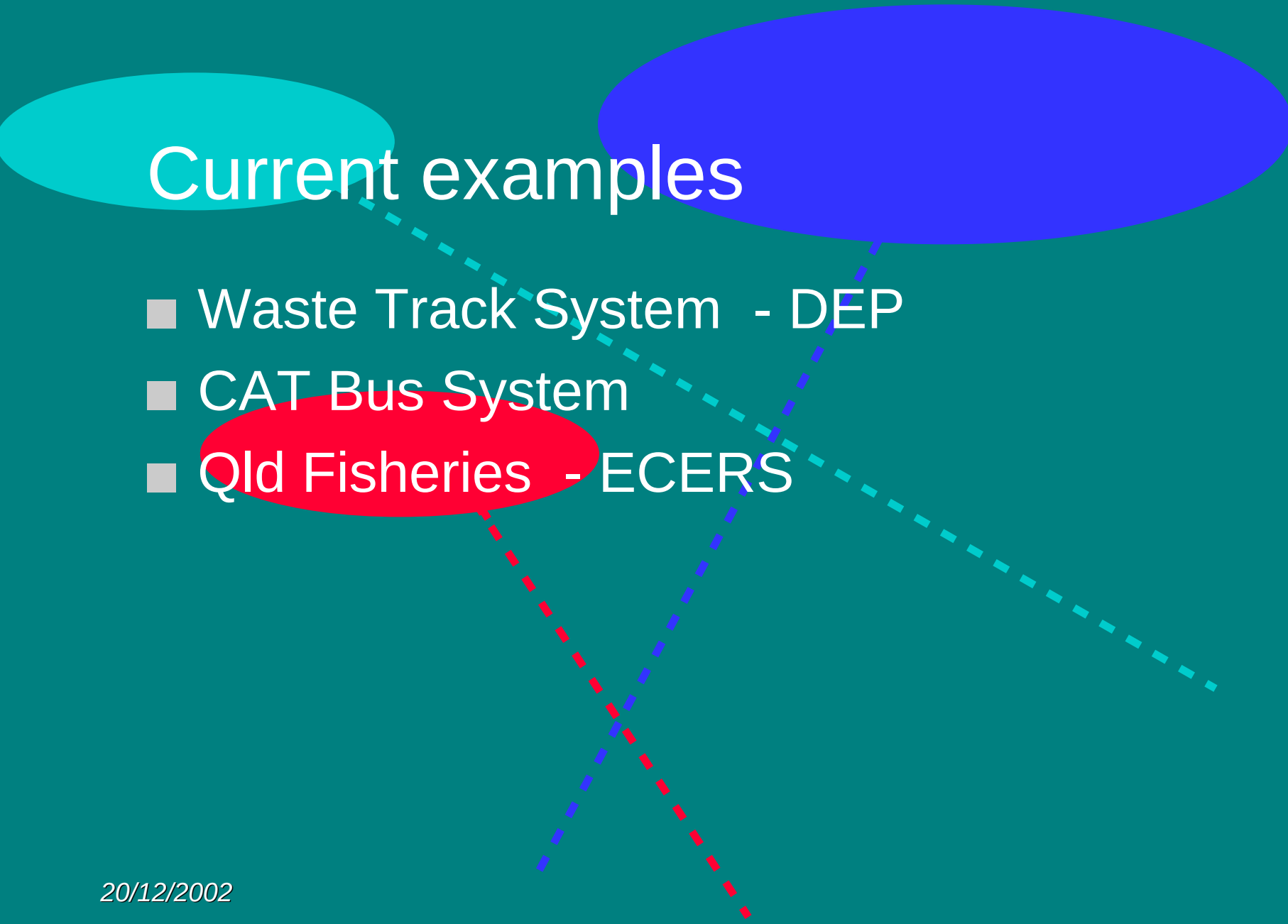
Current examples

- Waste Track System - DEP
- CAT Bus System



Current examples

- Waste Track System - DEP
- CAT Bus System
- Qld Fisheries - ECERS



Current examples

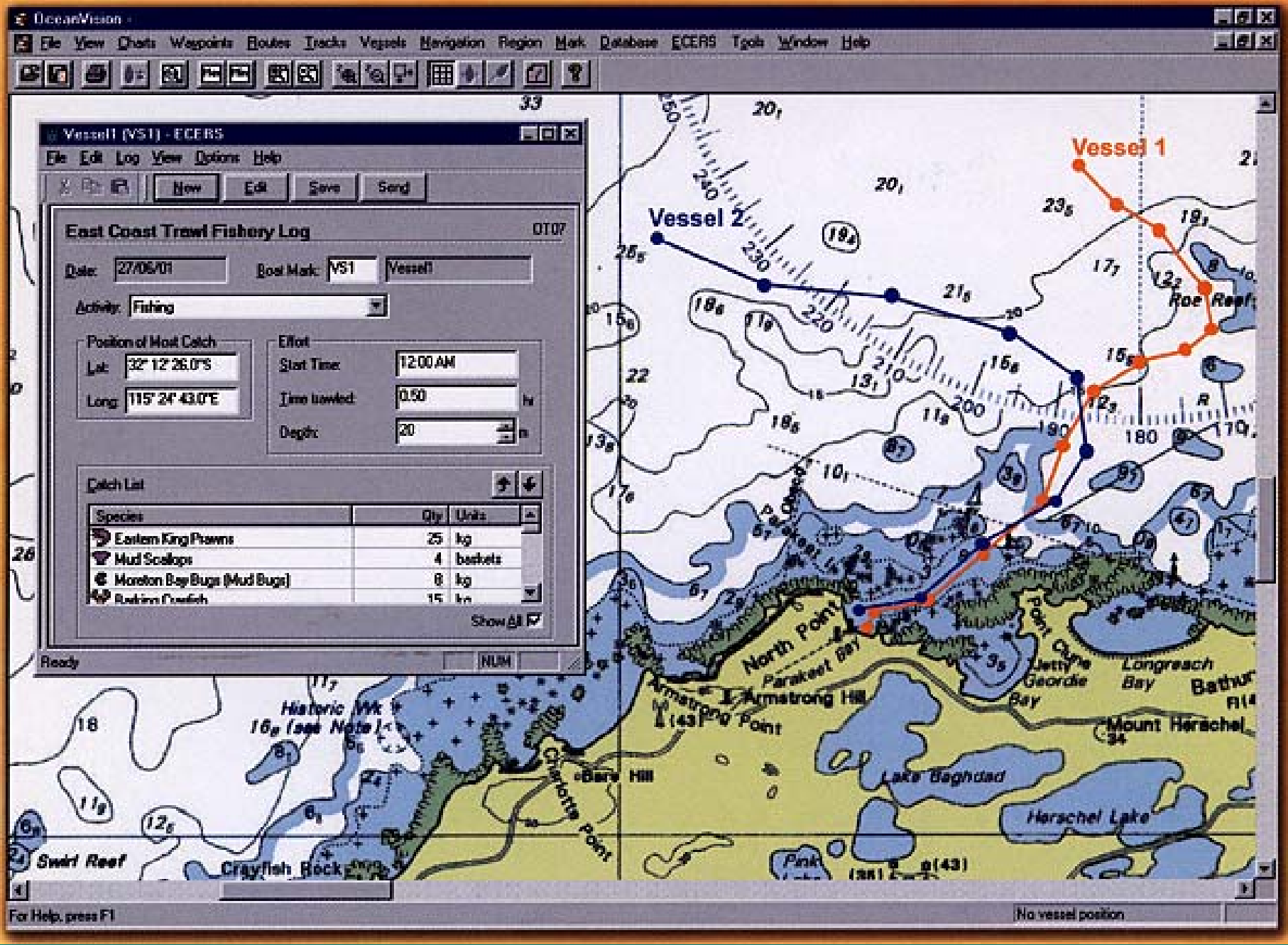
- Waste Track System - DEP
- CAT Bus System
- Qld Fisheries - ECERS
- Hire Cars

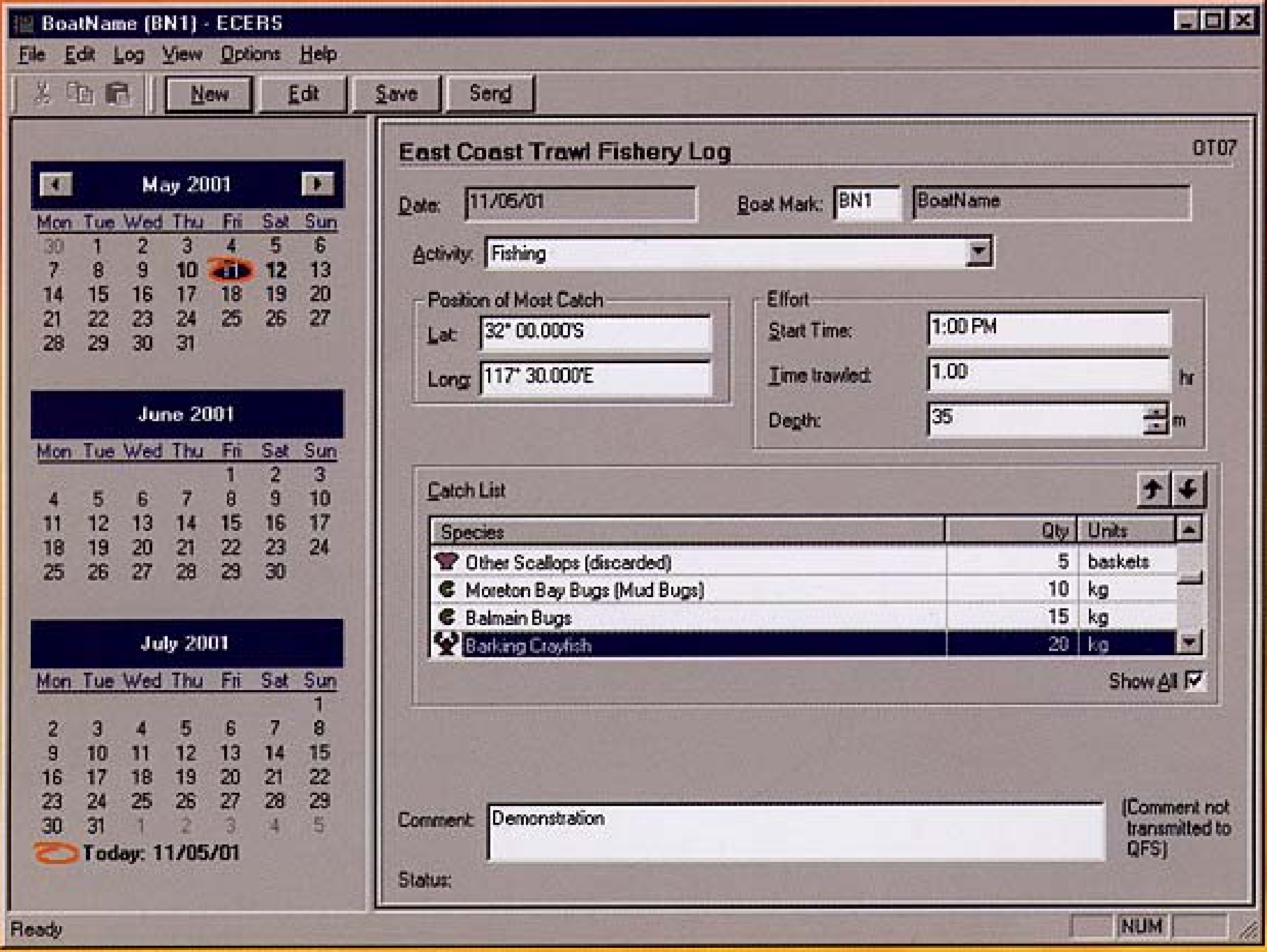
Current examples

- Waste Track System - DEP
- CAT Bus System
- Qld Fisheries - ECERS
- Hire Cars
- Refrigerated Trucks and Vans

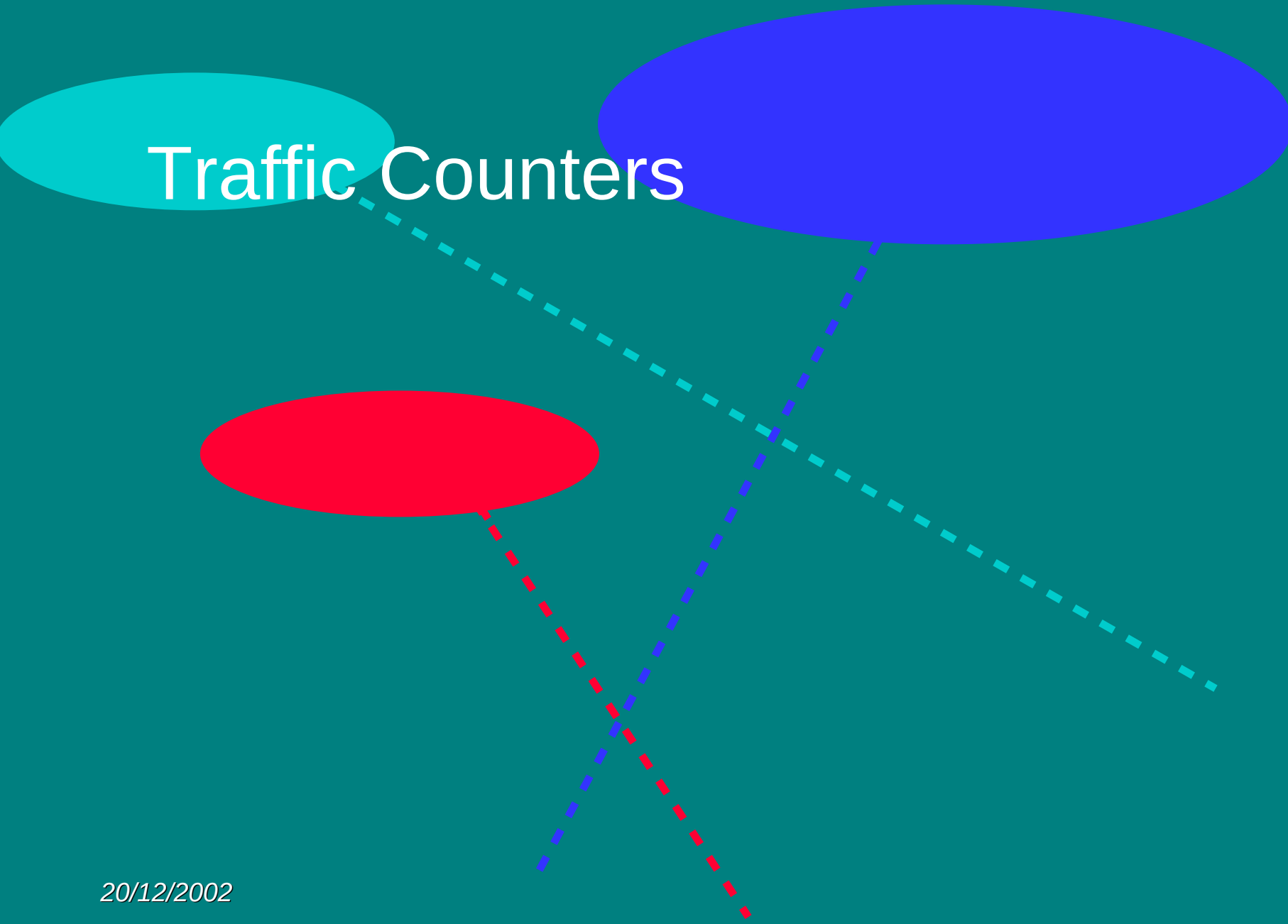
Current examples

- Waste Track System - DEP
- CAT Bus System
- Qld Fisheries - ECERS
- Hire Cars
- Refrigerated Trucks and Vans
- Vehicle management systems


OceanVision
File View Charts Waypoints Routes Tracks Vessels Navigation Region Mark Database ECERS Tools Window Help
Vessel1 (VS1) - ECERS
File Edit Log View Options Help
New Edit Save Send
East Coast Trawl Fishery Log
OT07
Date: 27/06/01
Boat Mark: VS1
Vessel1
Activity: Fishing
Position of Most Catch
Lat: 32° 12' 26.0"S
Long: 115° 24' 43.0"E
Effort
Start Time: 12:00 AM
Time towed: 0.50 hr
Depth: 20 m
Catch List
Species | Qty | Units
Eastern King Prawns | 25 | kg
Mud Scallops | 4 | baskets
Moreton Bay Bugs (Mud Bugs) | 8 | kg
Show All
Ready
NUM
Vessel 1
Vessel 2
Roe Reef
North Point
Parakeet Bay
Armstrong Hill
Armstrong Point
Point Clare
Jetty
Georgie Bay
Longreach Bay
Mount Herschel
Historic Wk
Bare Hill
Charlotte Point
Lake Baghdad
Herschel Lake
Swirl Reef
Crayfish Rock
For Help, press F1
No vessel position

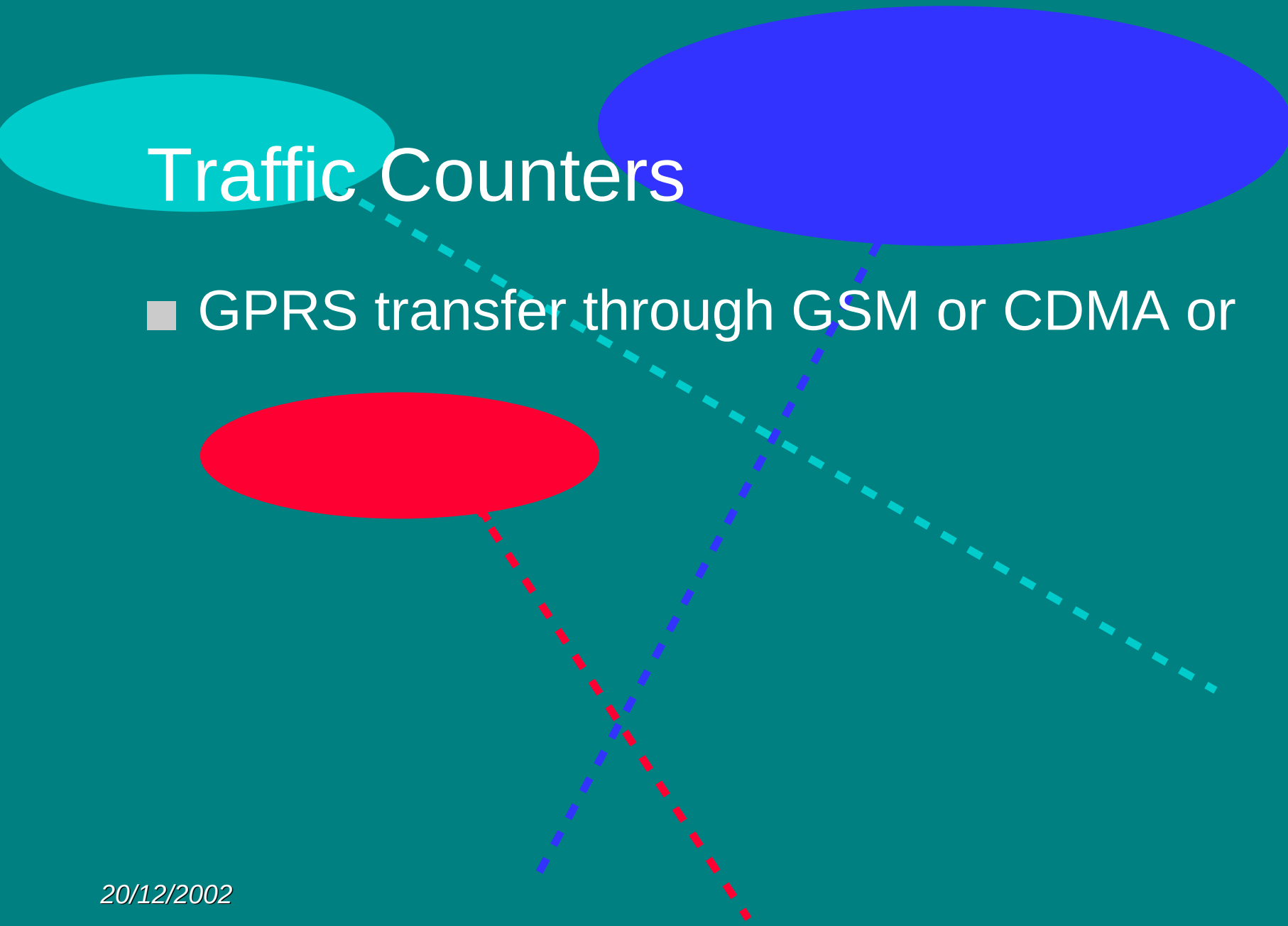

BoatName (BN1) - ECERS
File Edit Log View Options Help
New Edit Save Send
May 2001
Mon Tue Wed Thu Fri Sat Sun
30 1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31
June 2001
Mon Tue Wed Thu Fri Sat Sun
1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30
July 2001
Mon Tue Wed Thu Fri Sat Sun
1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31 1 2 3 4 5
Today: 11/05/01
East Coast Trawl Fishery Log
GT07
Date: 11/05/01
Boat Mark: BN1 BoatName
Activity: Fishing
Position of Most Catch
Lat: 32° 00.000'S
Long: 117° 30.000'E
Effort
Start Time: 1:00 PM
Time trawled: 1.00 hr
Depth: 35 m
Catch List
Species Qty Units
Other Scallops (discarded) 5 baskets
Moreton Bay Bugs (Mud Bugs) 10 kg
Balmain Bugs 15 kg
Barking Crayfish 20 kg
Show All
Comment: Demonstration
(Comment not transmitted to QFS)
Status:
Ready
NUM

Traffic Counters



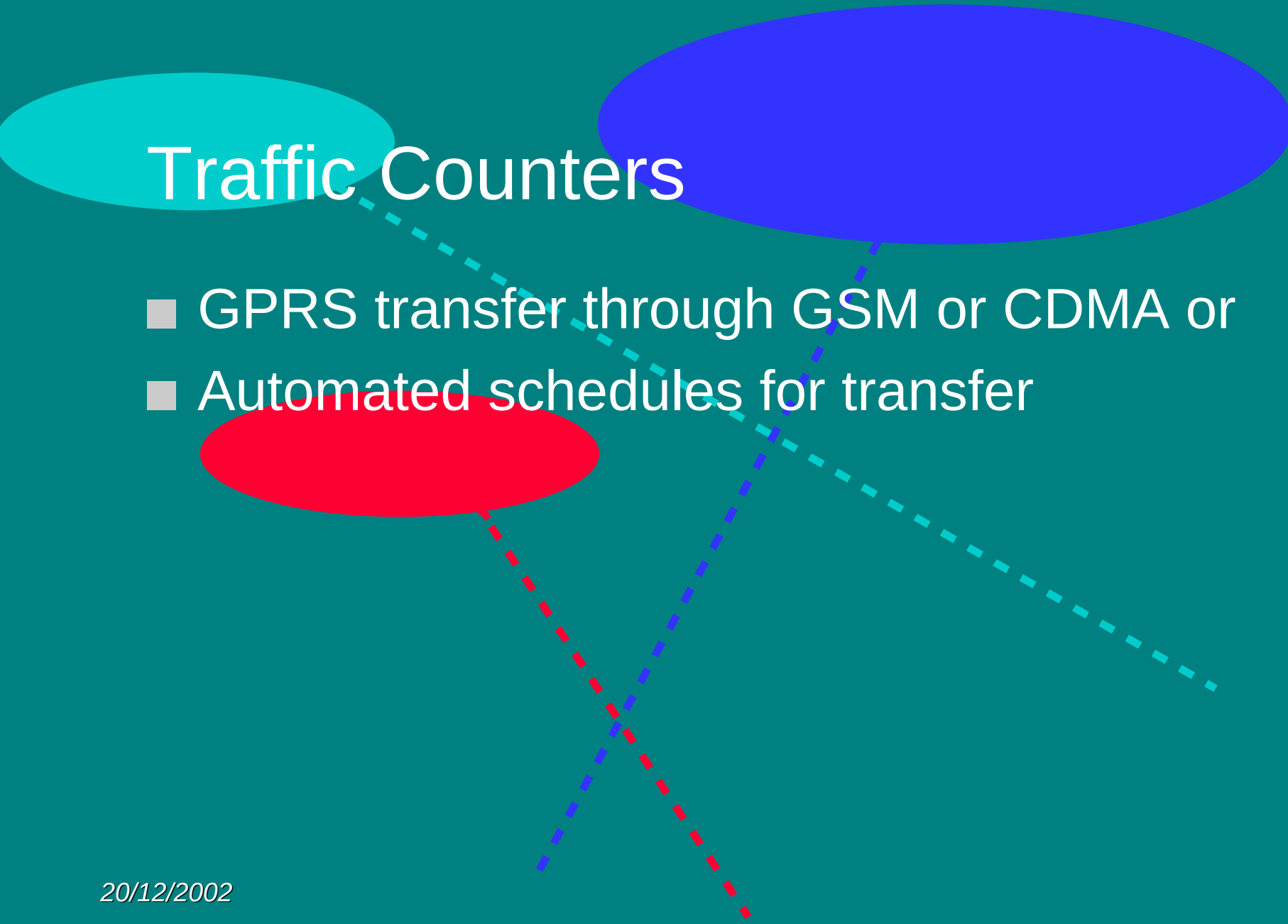
Traffic Counters

- GPRS transfer through GSM or CDMA or



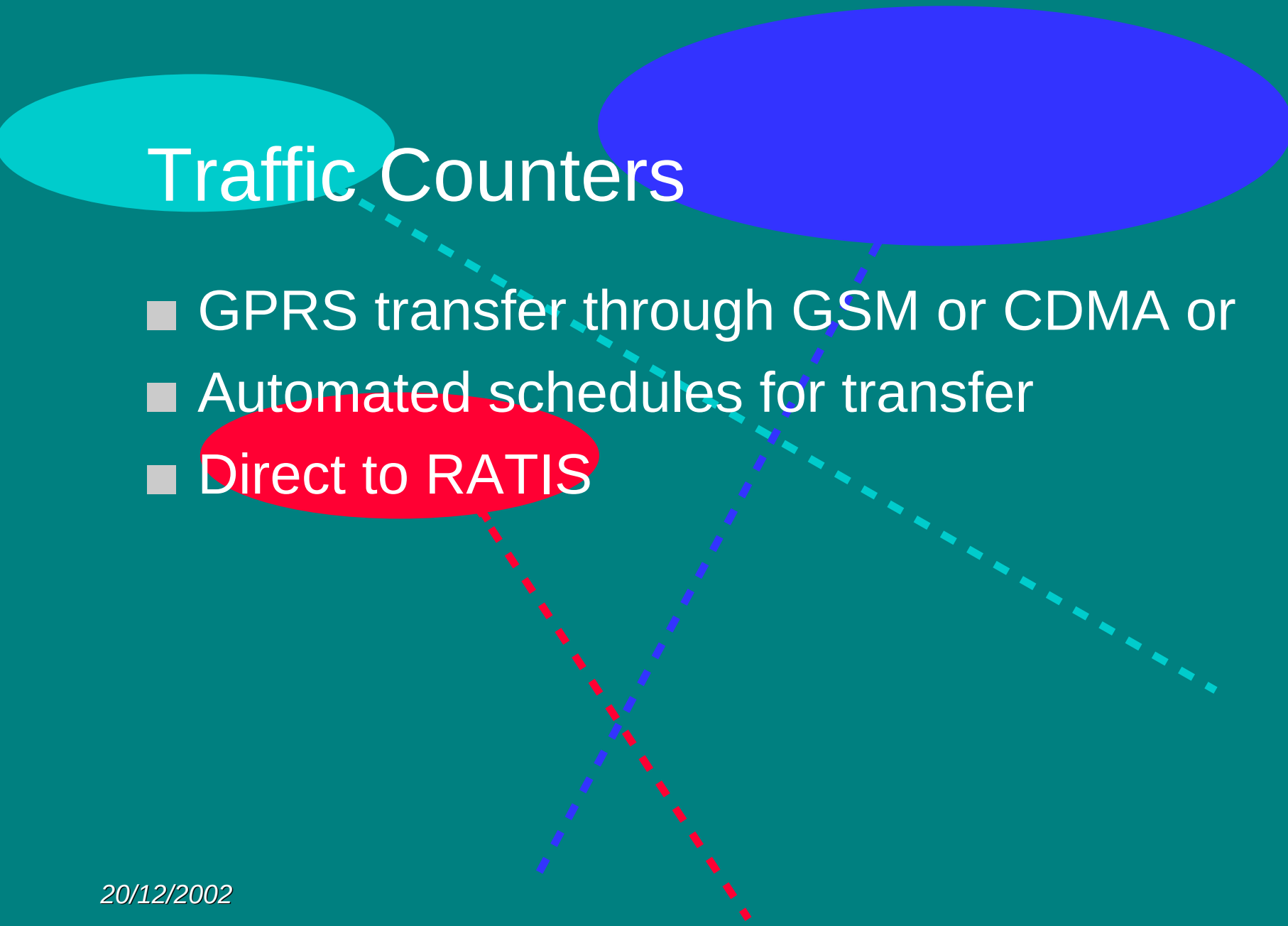
Traffic Counters

- GPRS transfer through GSM or CDMA or
- Automated schedules for transfer

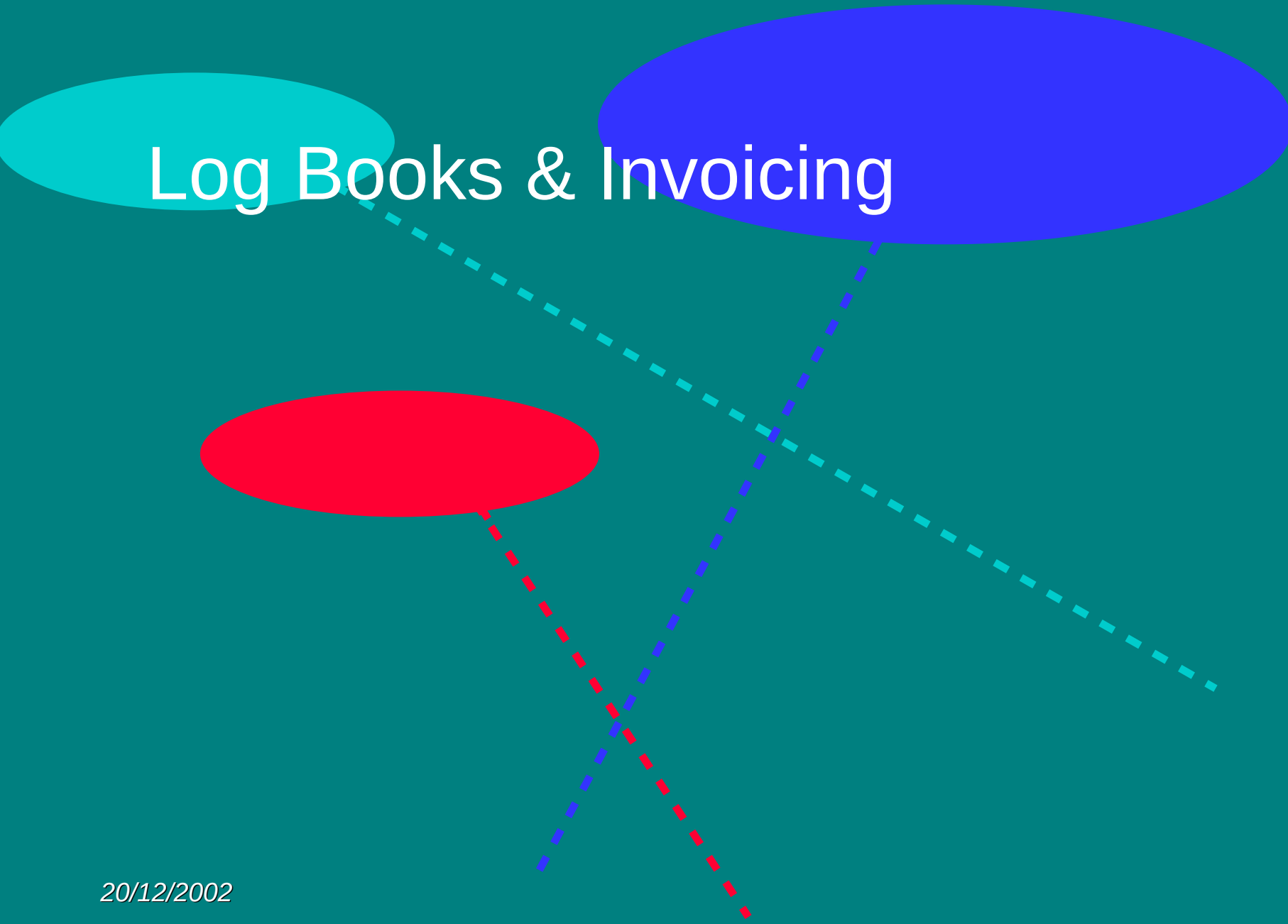


Traffic Counters

- GPRS transfer through GSM or CDMA or
- Automated schedules for transfer
- Direct to RATIS

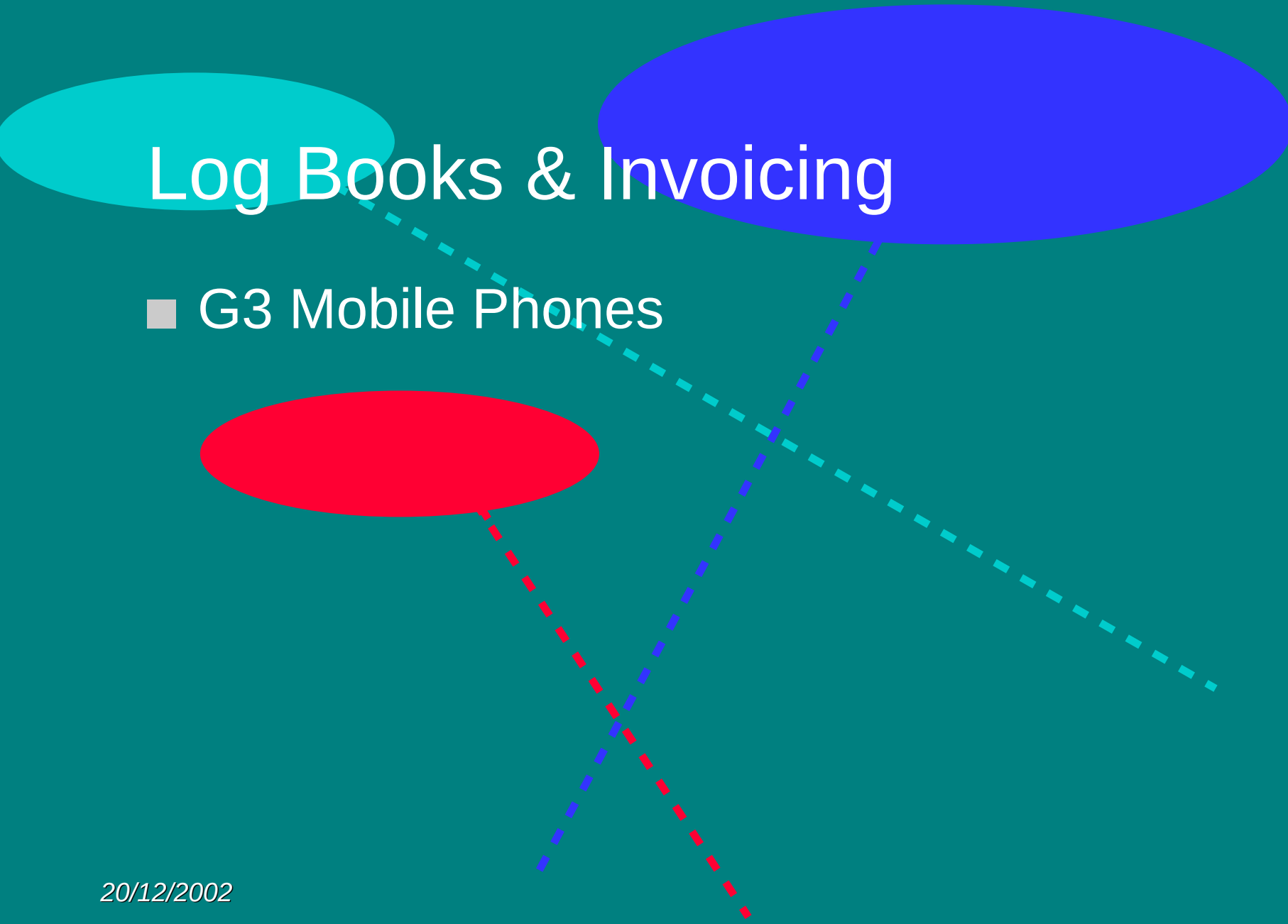


Log Books & Invoicing



Log Books & Invoicing

- G3 Mobile Phones



Log Books & Invoicing

- G3 Mobile Phones
- TOMS (Log book Email)

Log Books & Invoicing

- G3 Mobile Phones
- TOMS (Log book Email)
- GPRS transfer through GSM or CDMA

Log Books & Invoicing

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- G3 Mobile Phones
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- Direct to RATIS, ORACLE, et al

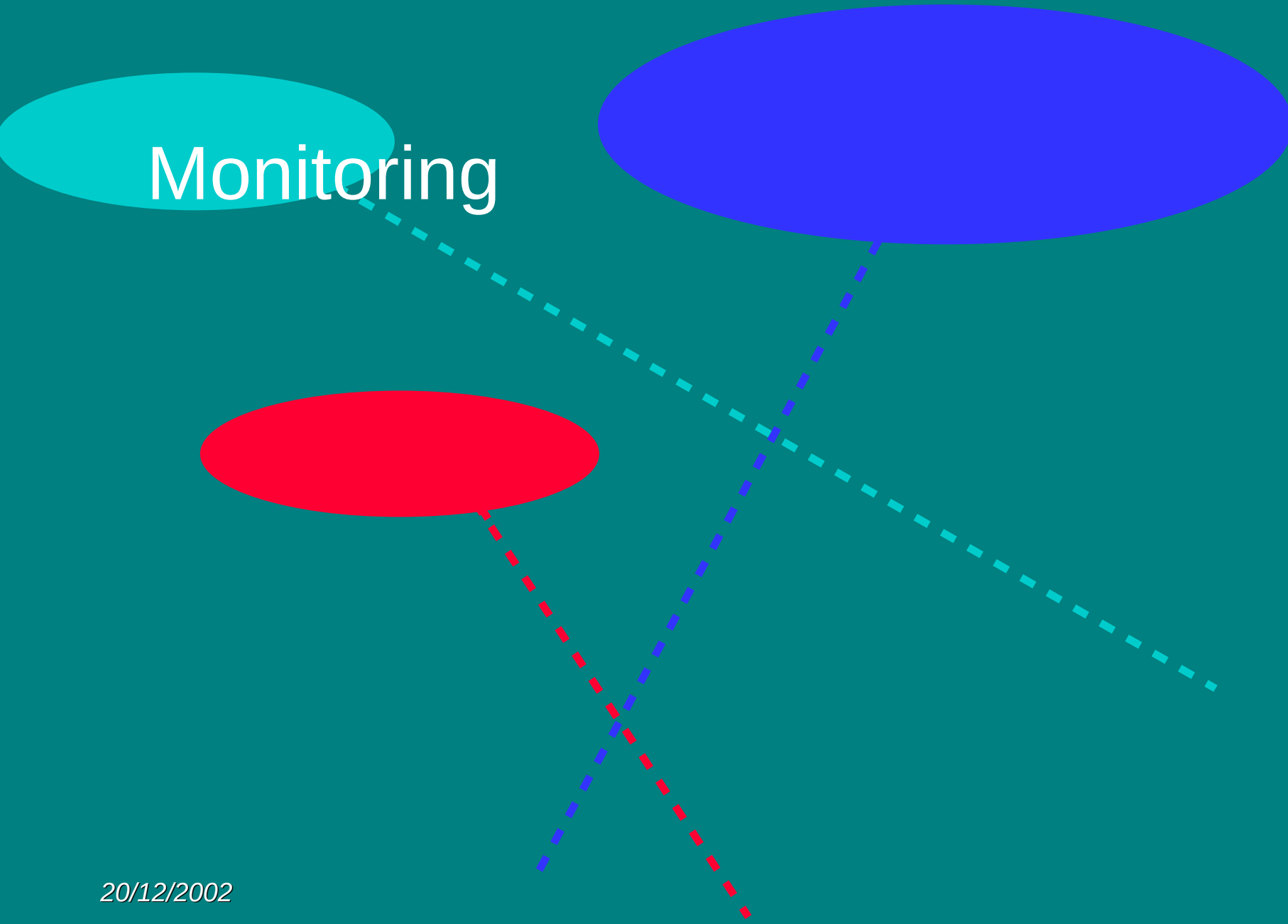
Log Books & Invoicing

- G3 Mobile Phones
- TOMS (Log book Email)
- GPRS transfer through GSM or CDMA
- Automated schedules for data transfer
- Direct to RATIS, ORACLE, et al
- Automated reminders

Log Books & Invoicing

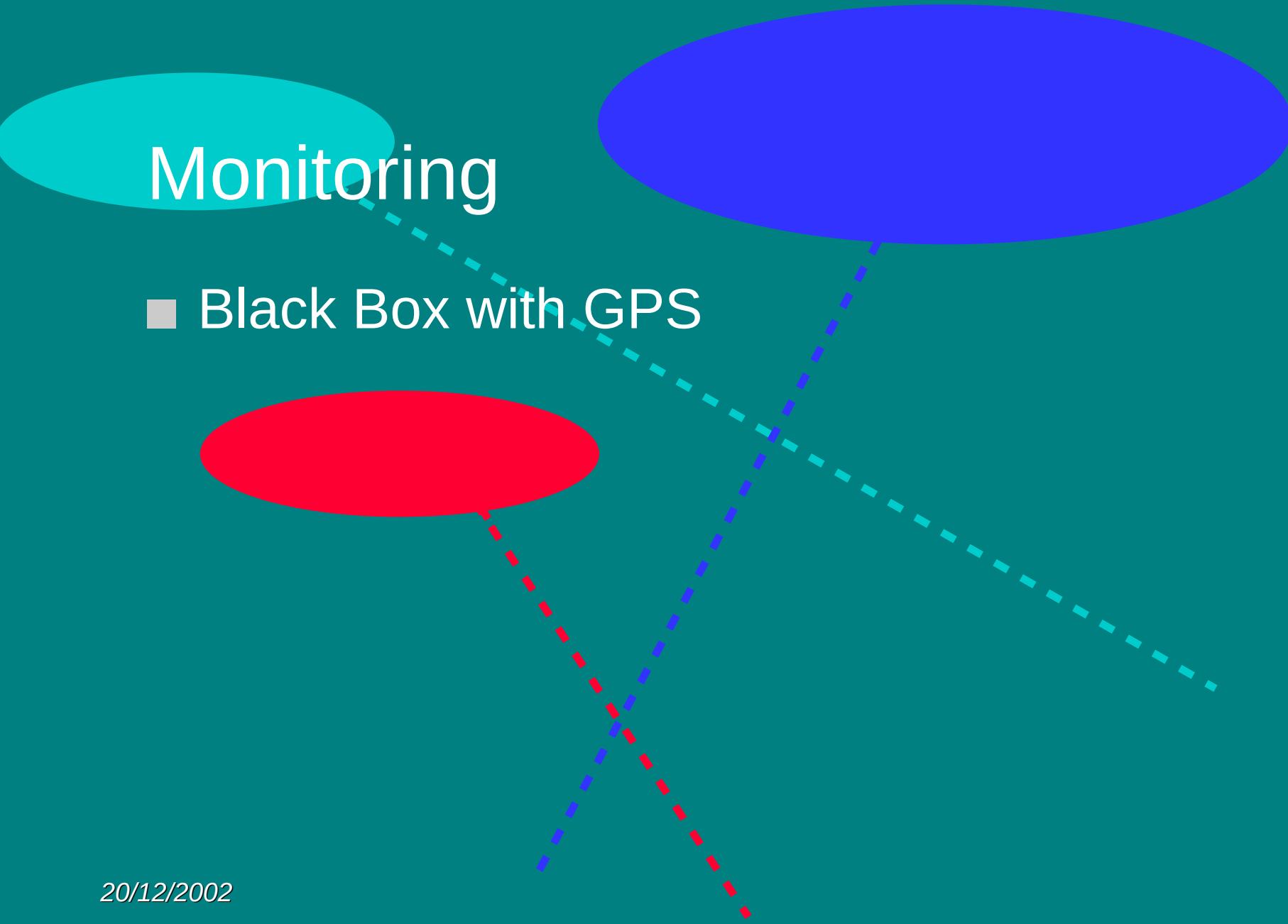
- G3 Mobile Phones
- TOMS (Log book Email)
- GPRS transfer through GSM or CDMA
- Automated schedules for data transfer
- Direct to RATIS, ORACLE, et al
- Automated reminders
- Rules required

Monitoring



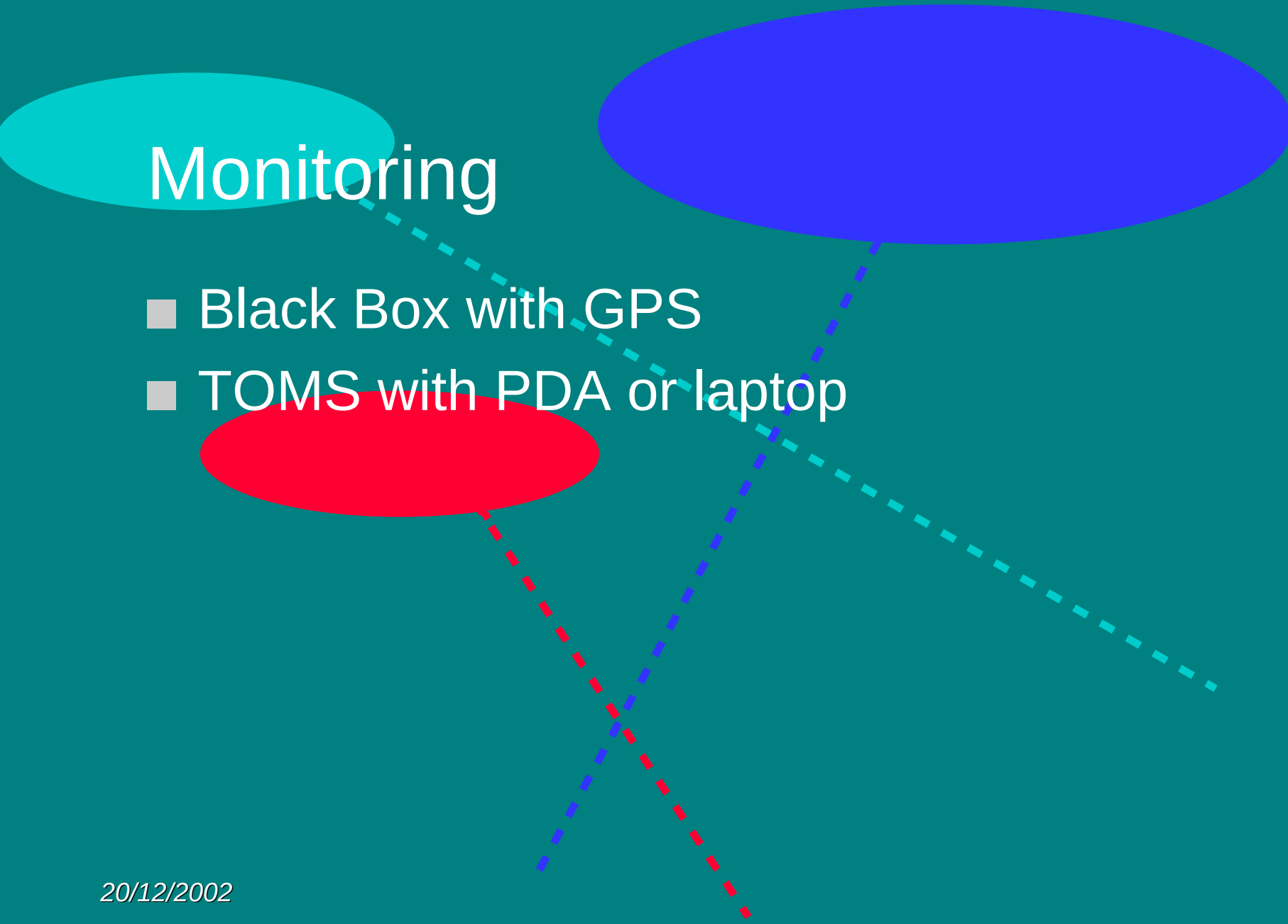
Monitoring

- Black Box with GPS



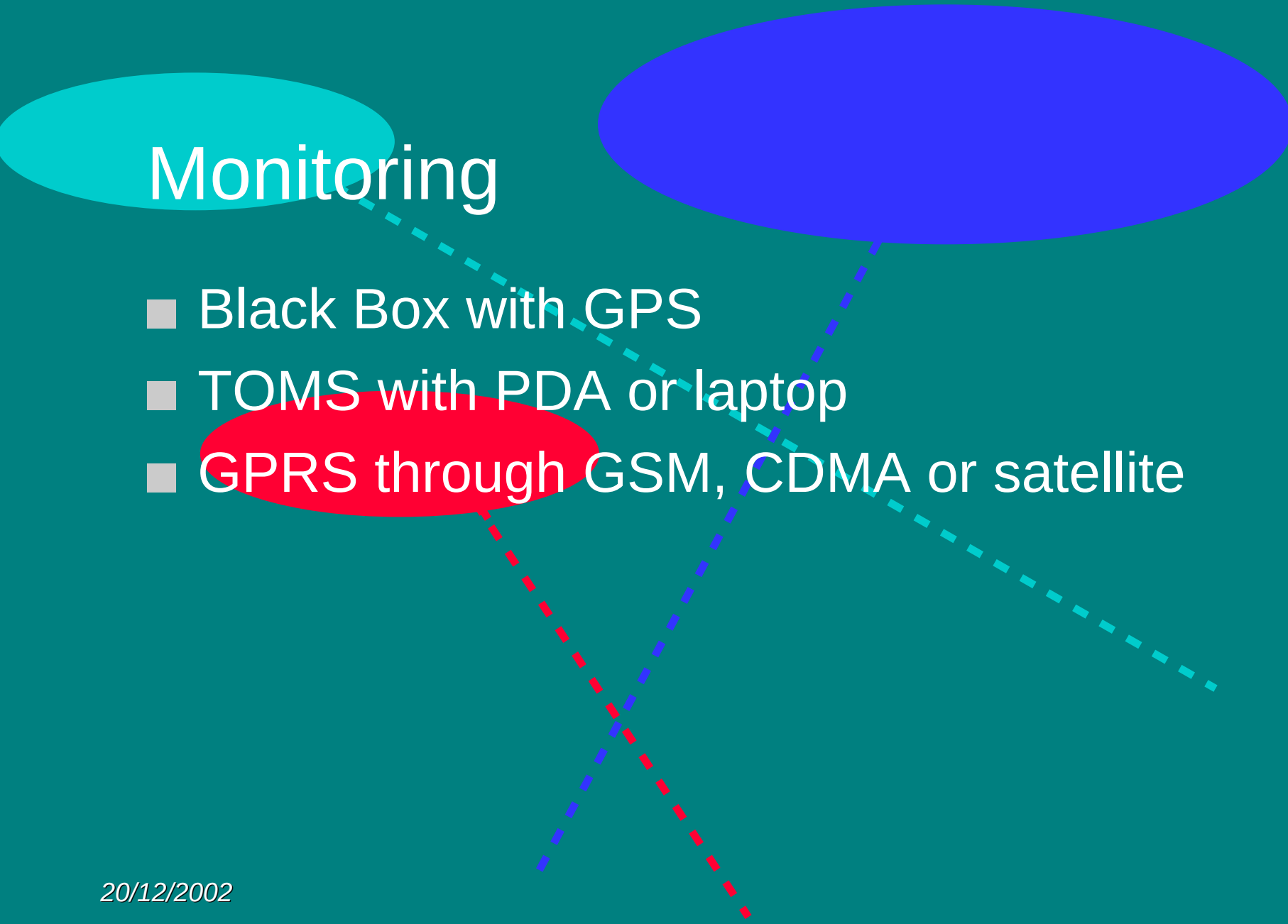
Monitoring

- Black Box with GPS
- TOMS with PDA or laptop



Monitoring

- Black Box with GPS
- TOMS with PDA or laptop
- GPRS through GSM, CDMA or satellite



Monitoring

- Black Box with GPS
- TOMS with PDA or laptop
- GPRS through GSM, CDMA or satellite
- Automated schedules for data transfer

Monitoring

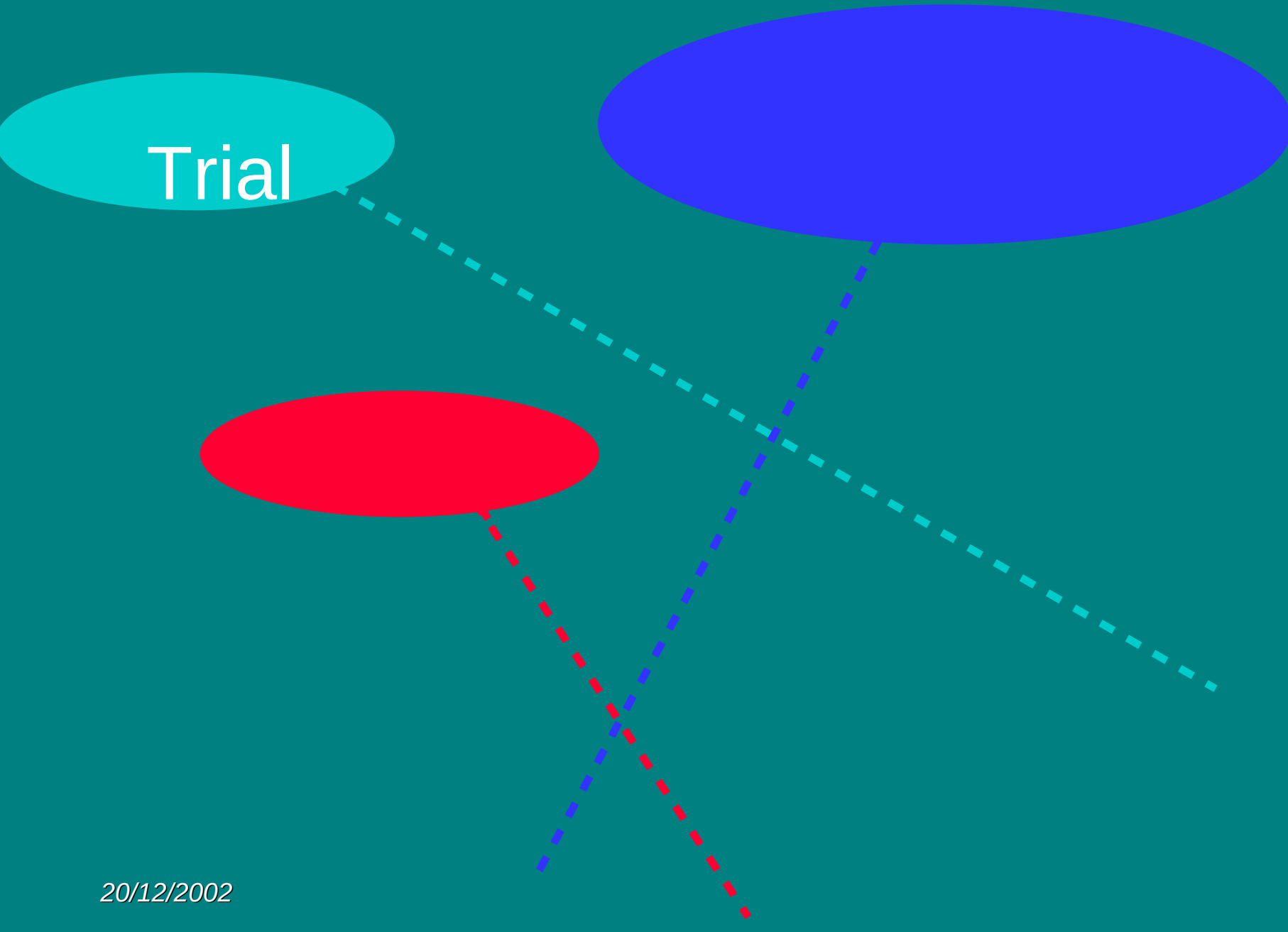
- Black Box with GPS
- TOMS with PDA or laptop
- GPRS through GSM, CDMA or satellite
- Automated schedules for data transfer
- Direct to monitor/server

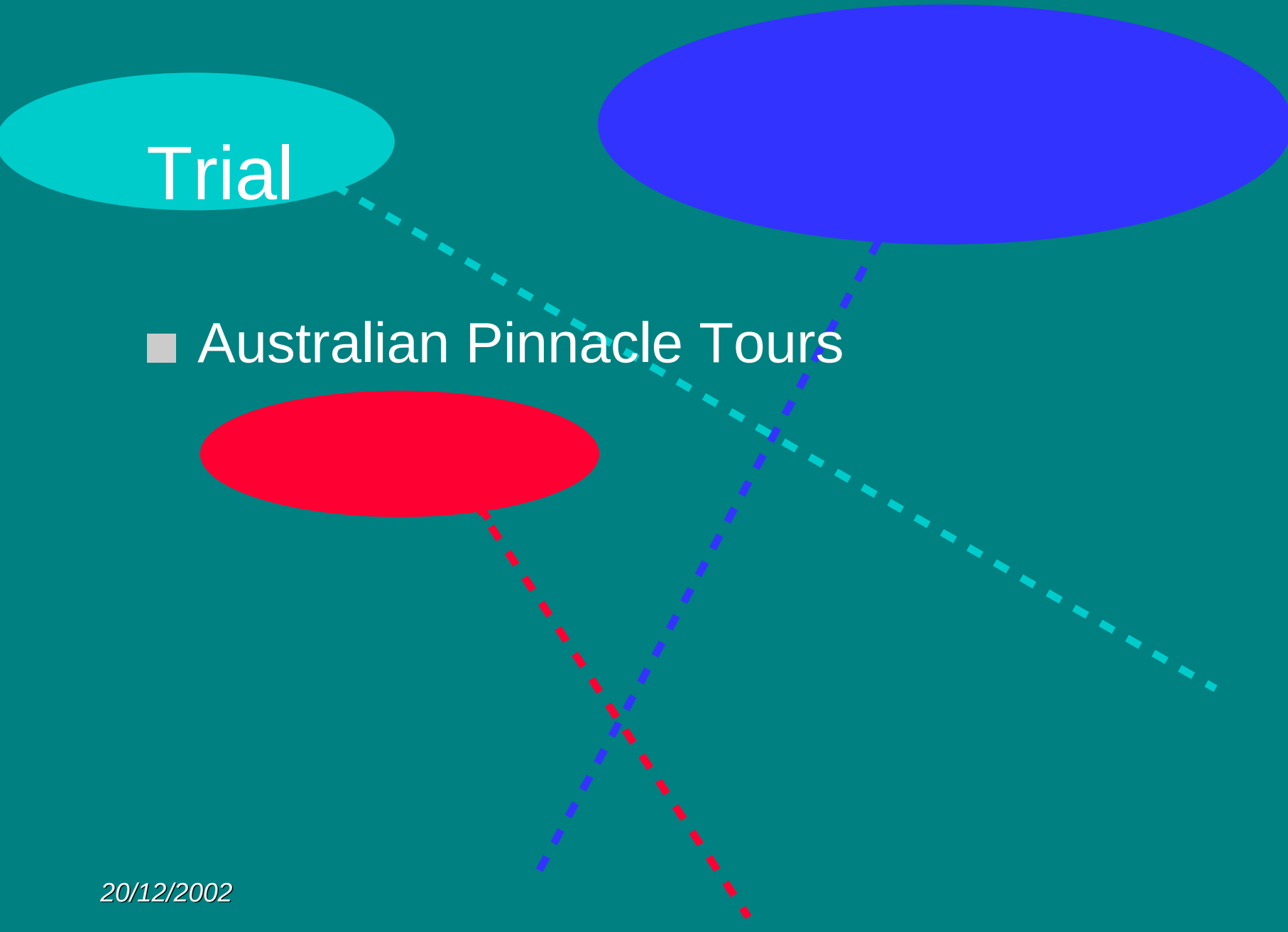
Monitoring

- Black Box with GPS
- TOMS with PDA or laptop
- GPRS through GSM, CDMA or satellite
- Automated schedules for data transfer
- Direct to monitor/server
- GPS Zones initiate/prompt TOMS

Monitoring

- Black Box with GPS
- TOMS with PDA or laptop
- GPRS through GSM, CDMA or satellite
- Automated schedules for data transfer
- Direct to monitor/server
- GPS Zones initiate/prompt TOMS
- Warnings and notices to drivers


Trial



- Australian Pinnacle Tours

Trial

- Australian Pinnacle Tours
- Customised electronic log book (TOMS)

Trial

- Australian Pinnacle Tours
- Customised electronic log book (TOMS)
- Nambung and Yanchep NP

Trial

- Australian Pinnacle Tours
- Customised electronic log book (TOMS)
- Nambung and Yanchep NP
- Nokia phone with Java

Trial

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Trial

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- Team - District/PVS

Trial

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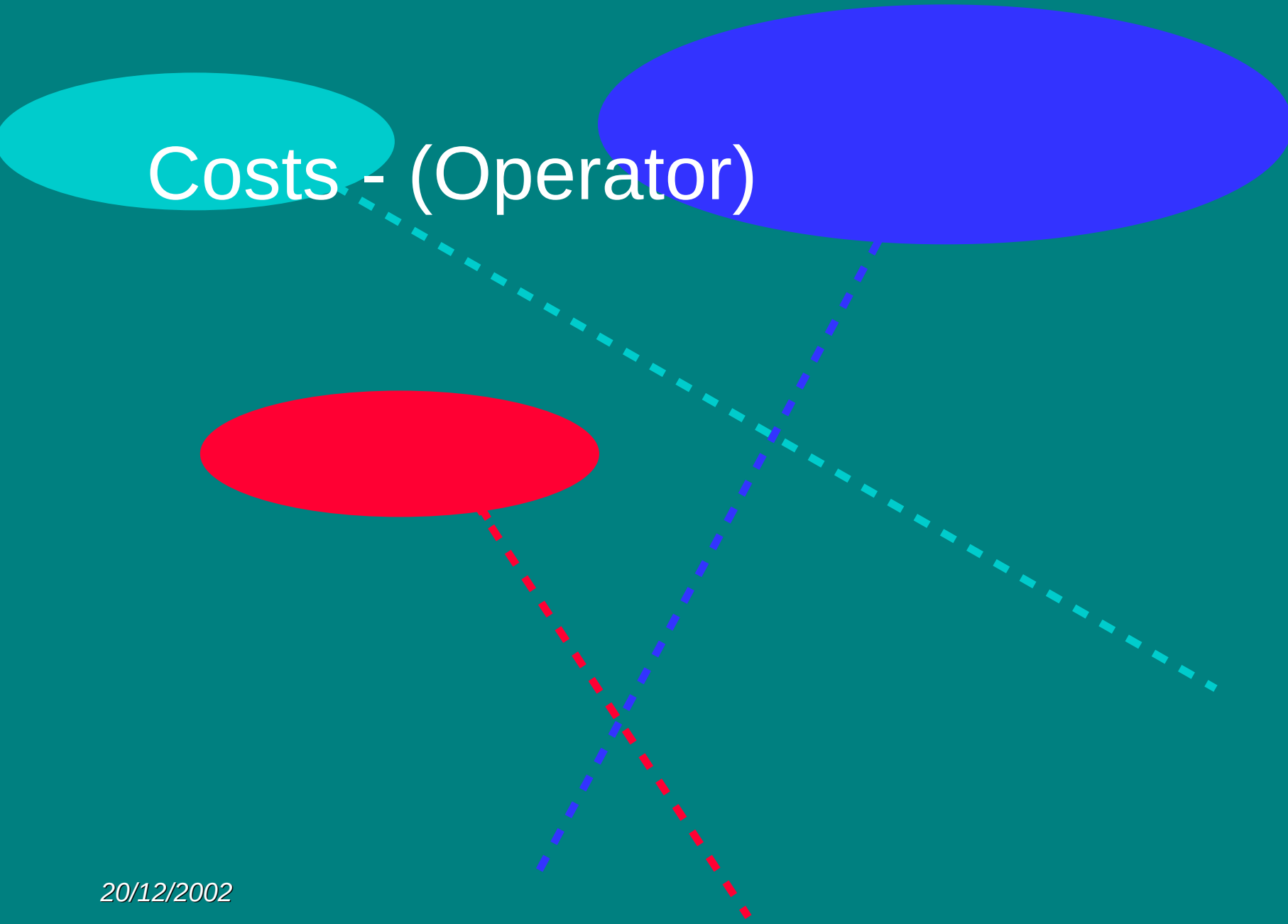
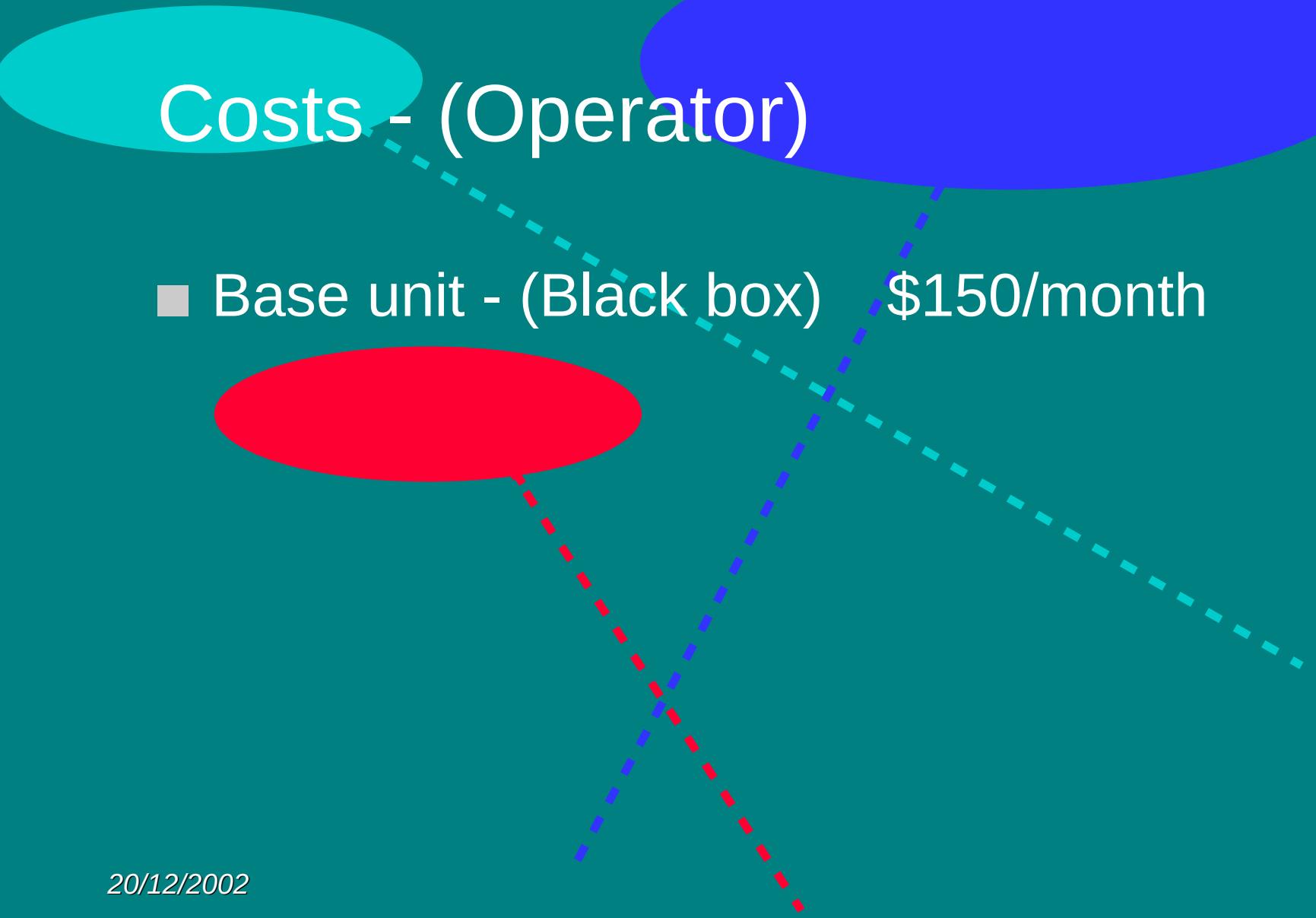
- Customised electronic log book (TOMS)
- Nambung and Yanchep NP
- Nokia phone with Java
- GPRS using GSM network
- Team - District/PVS
- Rules

Costs - (Operator)



Costs - (Operator)

- Base unit - (Black box) $150/month



Costs - (Operator)

- Base unit - (Black box) $150/month
- Base Unit with GPS $350/month

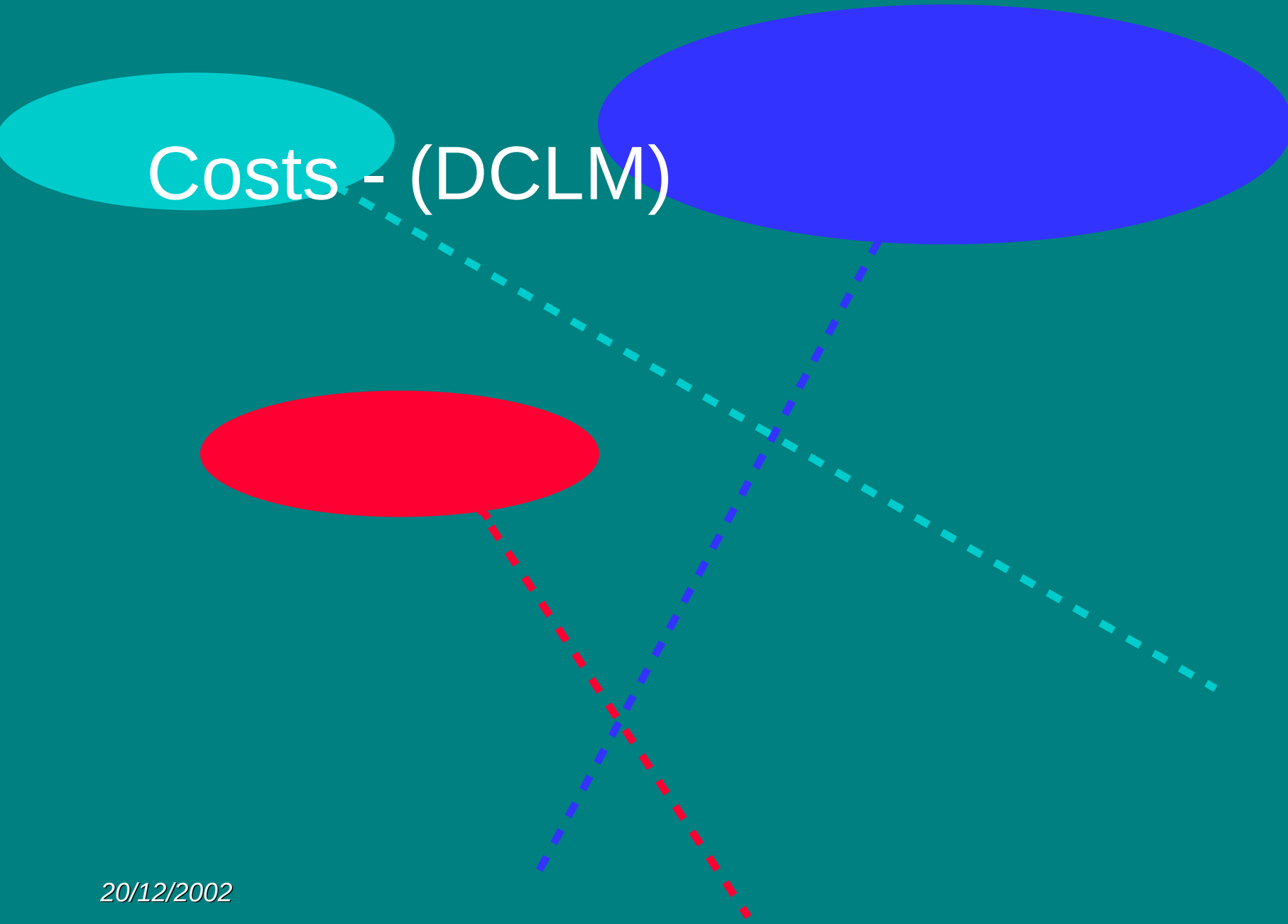
Costs - (Operator)

- Base unit - (Black box) $150/month
- Base Unit with GPS $350/month
- Communication costs $20/month

Costs - (Operator)

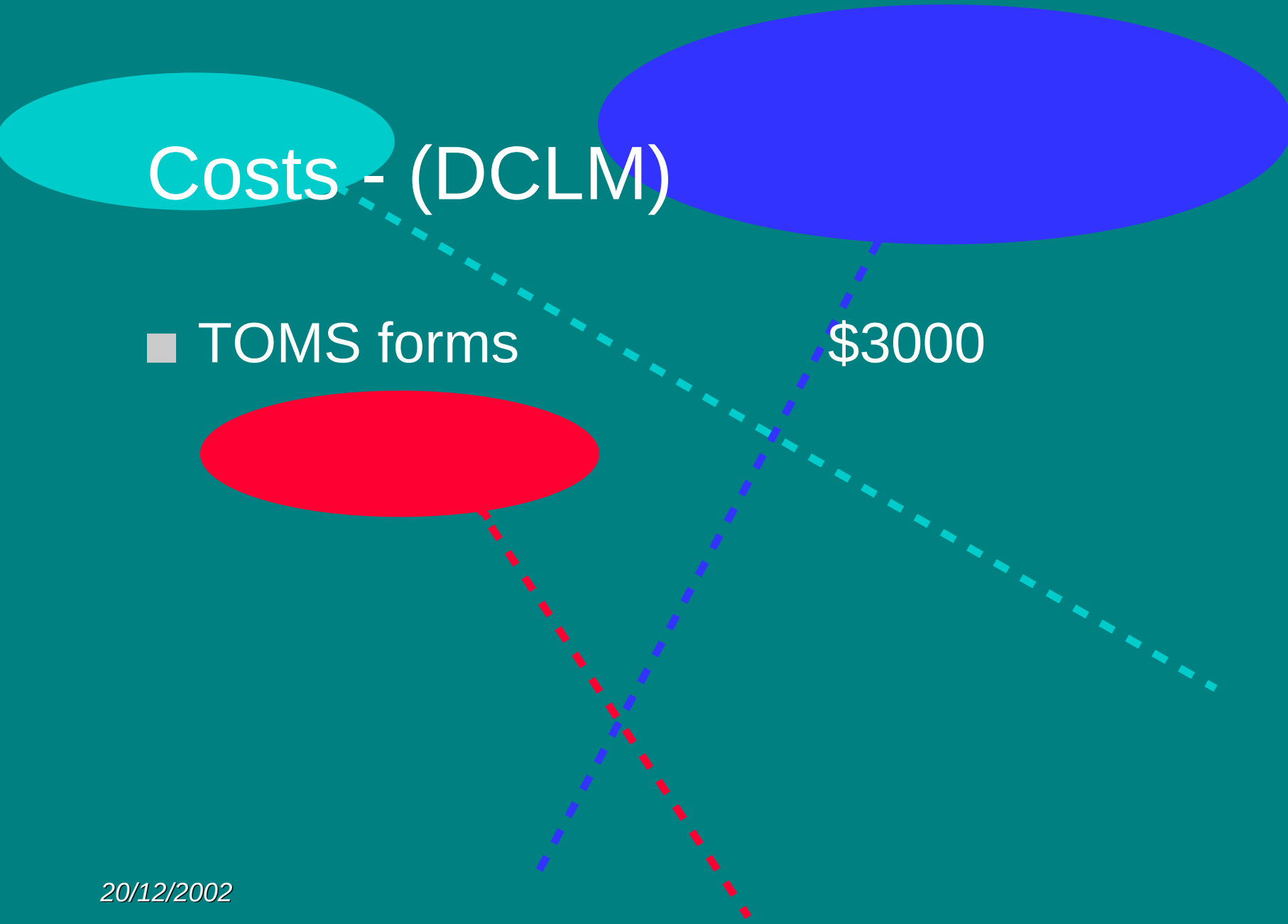
- Base unit - (Black box) $150/month
- Base Unit with GPS $350/month
- Communication costs $20/month
- Installation costs $150

Costs - (DCLM)



Costs - (DCLM)

- TOMS forms $3000



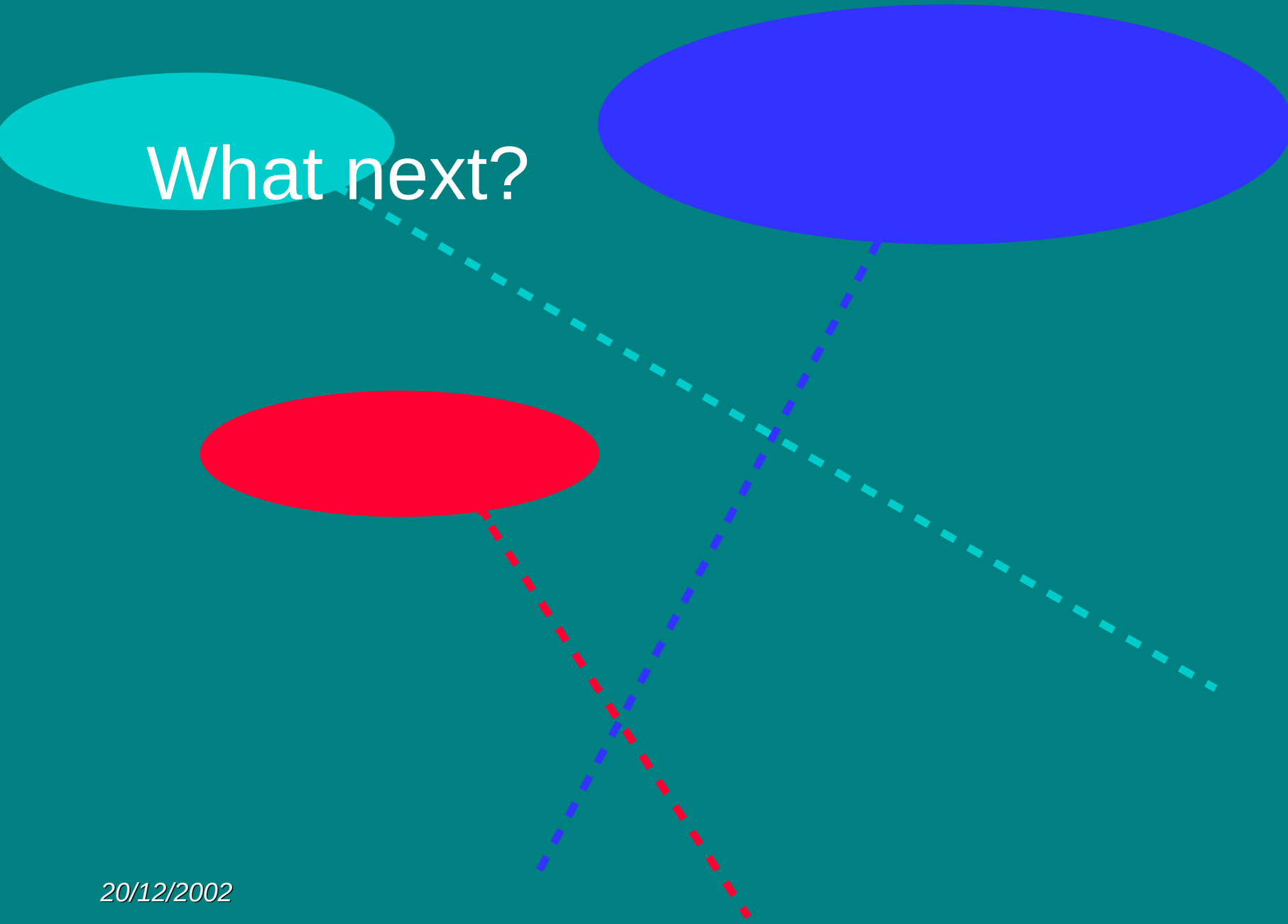
Costs - (DCLM)

- TOMS forms $3000
- Server $3000

Costs - (DCLM)

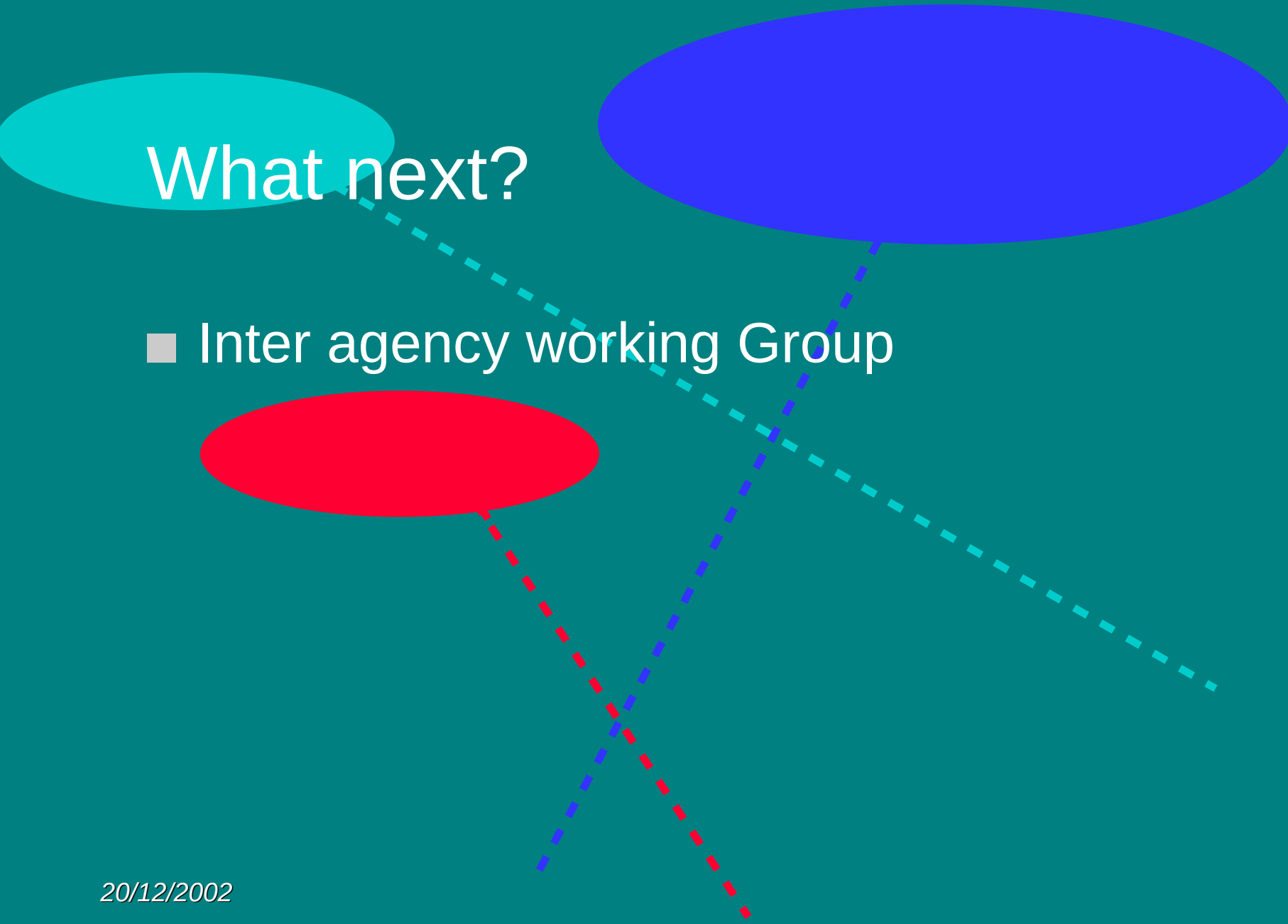
- TOMS forms $3000
- Server $3000
- Communication costs $150/month

What next?



What next?

- Inter agency working Group



What next?

- Inter agency working Group
- Review results of TOMS trial

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- Trial (marine) with GPS facility

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- Trial (marine) with GPS facility
- Assess capability to implement statewide

What next?

- Inter agency working Group
- Review results of TOMS trial
- Trial (marine) with GPS facility
- Assess capability to implement statewide
- Ownership of data

Discussion