

Day to Day Safety Survey

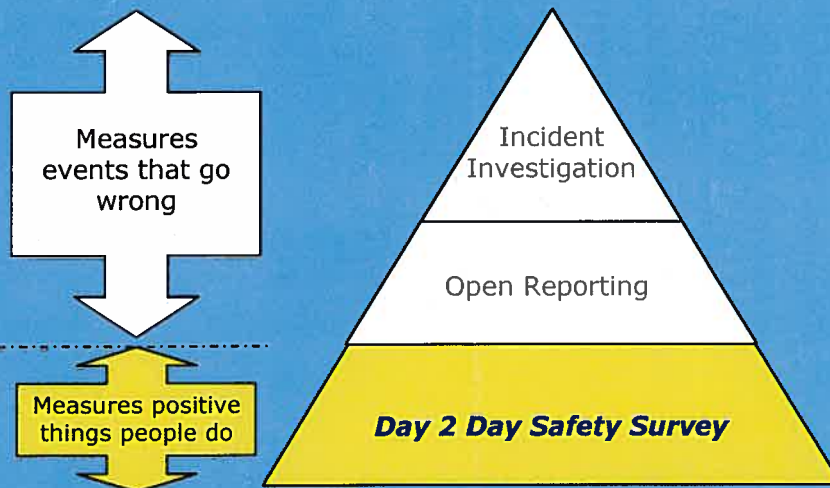
What temperature is the water?

The day to day safety survey is one of the first times any ATC provider has tried to address this issue, and answer the question **"How safe are we?"**.



Understanding positive techniques

Open reporting and the incident investigation process help us to establish what and why things go wrong, with the intention of preventing it from happening again. This is an important aspect of understanding our safety although typically a very small sample, with rates of occurrence at the more serious end of the scale, of less than 3 per 100,000 movements (in our industry).



The day to day safety survey aims to complement this by providing insight into what we do to ensure daily safety standards are maintained, and more importantly what can we encourage our operational staff to do every day that keeps them, their colleagues and the system safe?

Day to day safety survey, jointly with an incident investigation process, we believe are key to achieving an understanding of *"what temperature is the water"*.



Strip Management

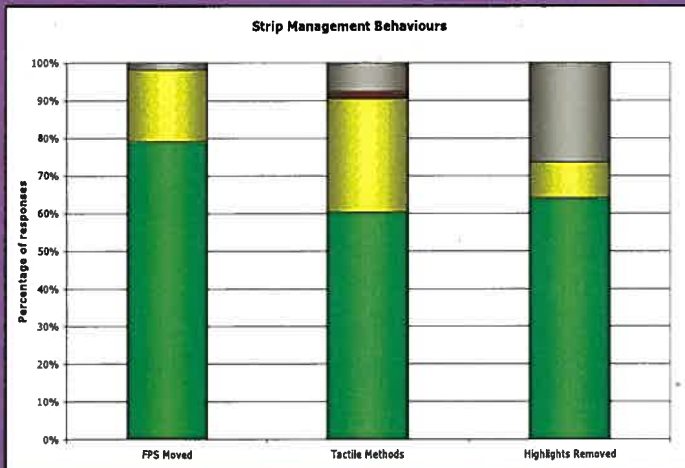
Strip Management refers to keeping the flight progress strips organised in place and keeping the information contained on the strips up to date. Flight progress strips form an integral part of the ATC method of operation. Controllers must have access, in working memory, to a large amount of information about the past, present, and future status of aircraft. Flight progress strips aid and maintain a controller's situational awareness. Flight progress strips also provide a geographical and/or temporal prompt through the layout of the strip board, which, whether it be at a local airport or an oceanic control area, is unique to the flight patterns of that area. Additionally flight progress strips aid the memory for future, planned activities; and the active involvement in generating the information is fundamental to the understanding and memory of the traffic situation.

Strip Management Safety Behaviours

Safety Behaviour	Explanation
The flight progress strips are moved to display the relative position of traffic	Not just randomly, but in such a way that the controller uses the FPS as the foundation for their Situation Awareness
Tactile methods are used to highlight specific events	Tactile methods can be obvious (cocking a strip) but they can also be quite individual.
Highlights are removed when no longer needed	Unnecessary highlights can be as disruptive as omitted highlights.

Example Results

Always
 Sometimes
 Never
 Not Applicable



Example Comments

Flight progress strips moved to display the relative position of the traffic

- "Strips moved around consistently"
- "Strips arranged in time order"
- "Strips not in level order"
- "Some strips moved into the appropriate position when aircraft called in"
- "Strips always displayed the traffic scenario"

Highlights removed when no longer needed

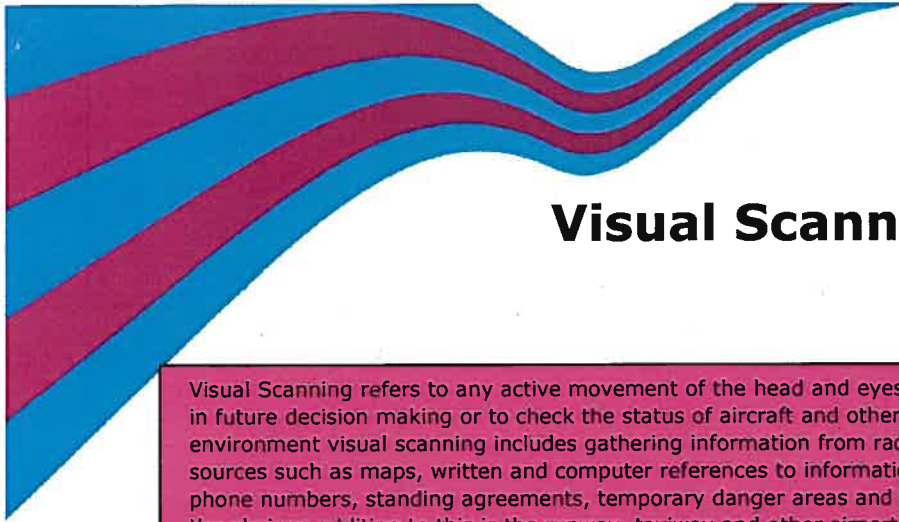
- "Cocked out strips placed back in bay when the highlight was no longer needed"
- "Three highlights for military crossers removed when clear"
- "One point-out was left on"
- "At one point, three aircraft had highlight function on"
- "No highlights used during this observation"

Interpretation

Of the three strip management behaviours, "highlights are removed when no longer needed" was 'always' observed on the vast majority of occasions. This is the strongest of the strip management behaviours.

In contrast "tactile methods are used to highlight specific events" was 'sometimes' observed in approximately one third of the observations, and 'never' observed in a few observations. This is the lowest scoring of the strip management behaviours and a possible area to focus improvement actions. Comments relating to this behaviour suggest that some conflicts are highlighted by cocking out strips, but not all.

The example results and comments that have been created here are for illustrative purposes only.



Visual Scanning

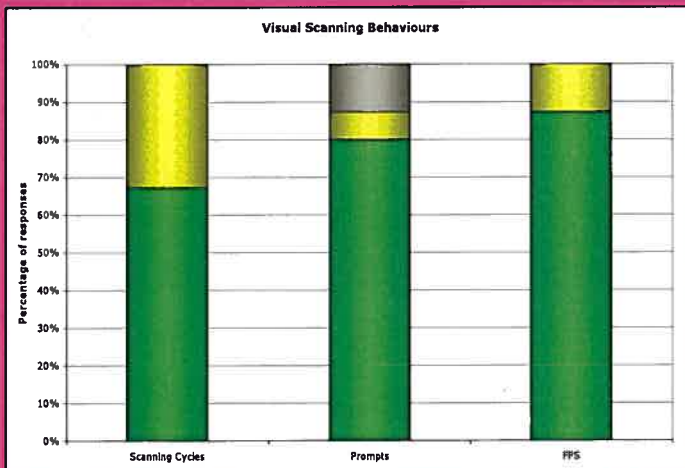
Visual Scanning refers to any active movement of the head and eyes to gather relevant data to be used in future decision making or to check the status of aircraft and other information. Typically in a radar environment visual scanning includes gathering information from radar, flight progress strips and other sources such as maps, written and computer references to information regarding weather, frequencies, phone numbers, standing agreements, temporary danger areas and so on. In an aerodrome environment the obvious addition to this is the runway, taxiway and other airport environmental features.

Visual Scanning Safety Behaviours

Safety Behaviour	Explanation
Scanning cycles are completed	Look for the habit of continuing an interrupted cycle where it was left in stead of starting all over again every time.
Prompts from others are received and acknowledged	It is a good thing if a controller does notice and use prompts from others but they must not rely on them.
Flight progress strips are used to verify received information	FPS should be part of the scanning cycle. Look for regular scanning of the FPS instead

Example Results

Always
 Sometimes
 Never
 Not Applicable



Example Comments

Scanning cycles are completed

- "Always radar-strips-radar"
- "Scan was highly methodical"
- "Scan tended to be incomplete and irregular"
- "Scan was interrupted when lots of aircraft called in - scan was resumed from the beginning"

Flight progress strips are used to verify received information

- "Strips were cross-checked on first call"
- "When busy this was not always done"
- "Not reading strips on all occasions"
- "Routings in particular were verified against the strips"

Prompts from others are received and acknowledged

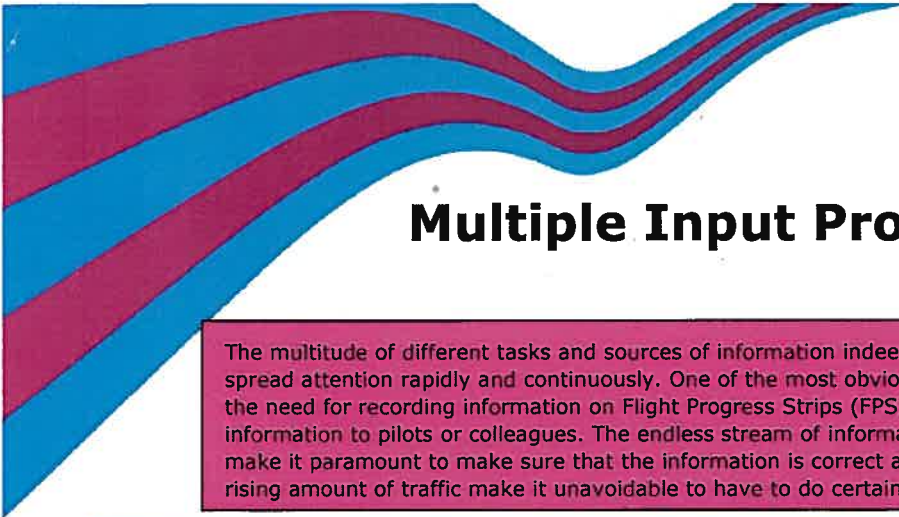
- "Good interaction between sector team"
- "Occasional prompts from controller on next sector"
- "Identification of non-standard situations by the planner"

Interpretation

Of the three visual scanning behaviours, "prompts from others are received and acknowledged" was 'always' observed on the vast majority of occasions. This is the strongest of the visual scanning behaviours.

In contrast "scanning cycles are completed" was observed 'sometimes' in almost one third of the observations; this is the lowest scoring of the visual scanning behaviours and a possible area to focus improvement actions. Comments relating to this behaviour suggest on the occasions that when a scan is interrupted it is resumed from the start, whilst others highlight hap-hazard scanning.

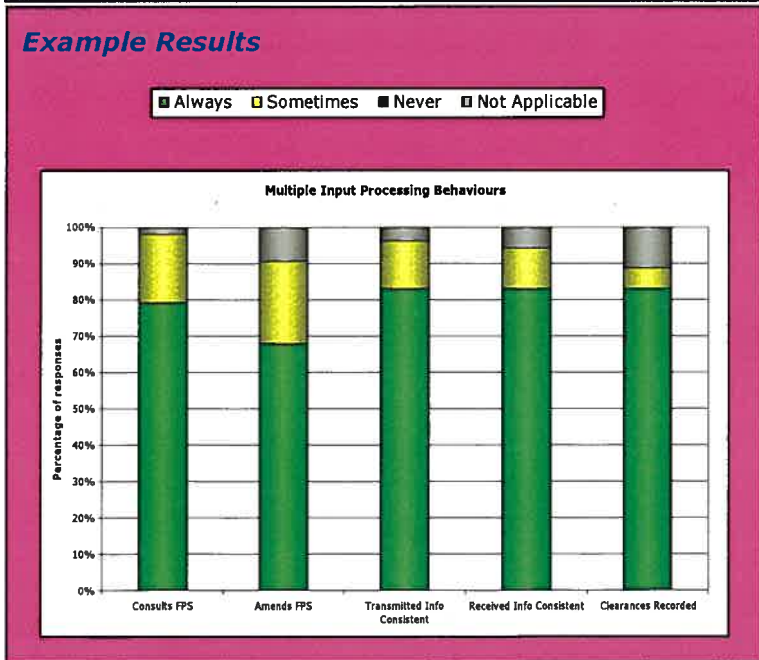
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Multiple Input Processing

The multitude of different tasks and sources of information indeed force a controller to be able to spread attention rapidly and continuously. One of the most obvious areas in which this is noticeable is the need for recording information on Flight Progress Strips (FPS) and the need for transmitting this information to pilots or colleagues. The endless stream of information and the continuous changes make it paramount to make sure that the information is correct all the time. Task load and the ever rising amount of traffic make it unavoidable to have to do certain things at the same time.

Multiple Input Processing Safety Behaviours	
Safety Behaviour	Explanation
The controller consults flight progress strips during transmission or reception of information	...with the emphasis on during instead of looking at the strip, then talking, then looking at the strip again.
The controller amends or annotates the flight progress strips during transmission	
Where relevant, transmitted information is consistent with flight progress strip information	...as a check whether the flight progress strip is consulted consciously and correctly.
Where relevant, received information is consistent with flight progress strip information	
Clearance information is recorded on the flight progress strips	Anything that is contained in a clearance is considered to be safety critical and must be recorded, even if it seems insignificant in the opinion of the controller.



Example Comments

Consults flight progress strips during transmission or reception of information

- "Looks at strips as speaking"
- "Tends to be retrospective"
- "Sometimes the strip is digested in advance"
- "Less so on reception of information"

Clearance information is recorded on the flight progress strips

- "Strips marked in reverse order"
- "Very precise and methodical approach"
- "Some information not recorded on second strip 'until later'"

The controller amends or annotates flight progress strips during transmission

- "Often transmits then amends strip"
- "Strip always marked after transmission"

Interpretation

Of the five multiple input processing behaviours, "clearance information is recorded on the flight progress strips" was the strongest behaviour. It was 'always' observed in approximately 90% of the applicable observations. In contrast "the controller amends or annotates the flight progress strips during transmission" was 'sometimes' observed in almost one third of the observations; this is the lowest scoring of the multiple input processing behaviours. Comments relating to this behaviour suggest that the strips are often amended after transmission rather than during.

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