



Driving efficient use of spectrum

Considerations for new licence conditions

November 2024



New licence conditions for ESL

A package of three elements to improve spectrum utilisation

Payment by instalment is essential to address industry sustainability

- Spectrum licence payments by annual instalments significantly improves affordability
- Instalment payments simplify UIOLI – “forgone” spectrum results in payment cessation, rather than loss of upfront payments

Spectrum sharing schemes harm allocation efficiency and have been unsuccessful globally

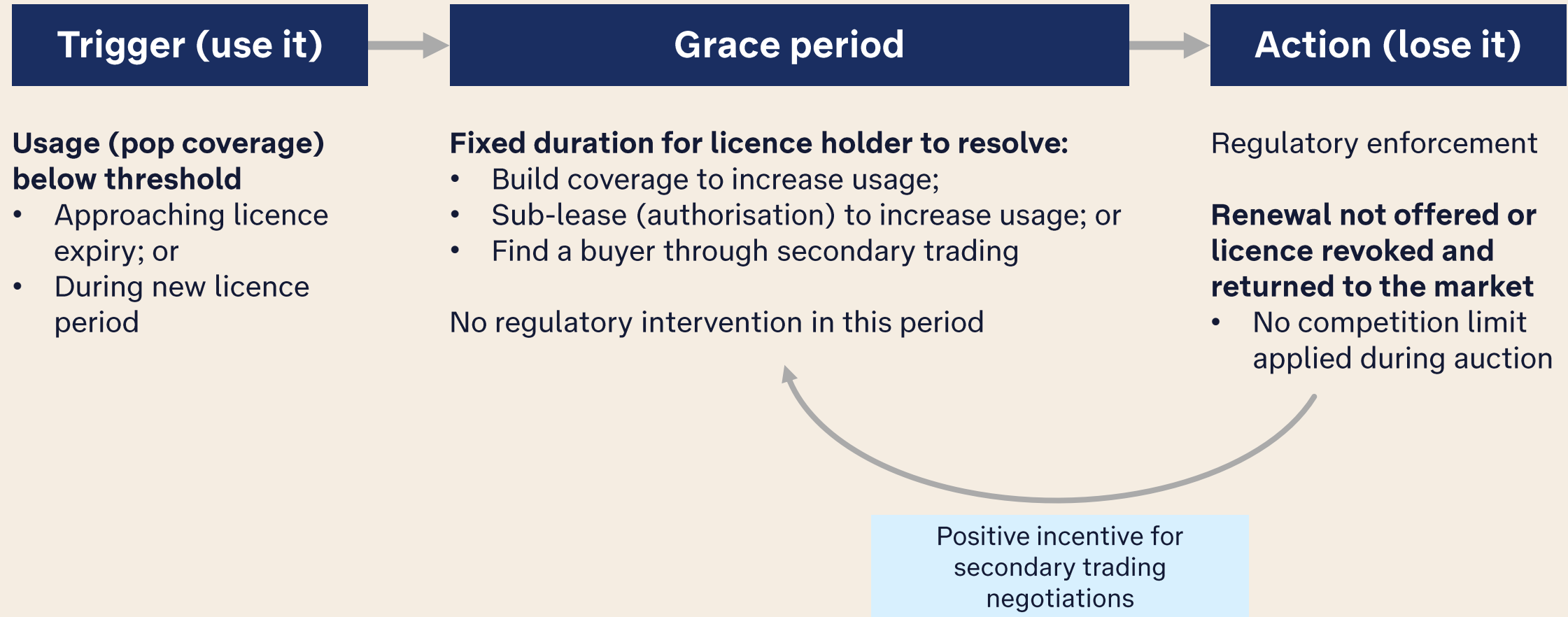
- Secondary trading and/or authorisation are better ways to satisfy improve spectrum utilisation
- US example: CBRS has been poorly utilised, generating \$4B licence revenue; C-band auction generated \$81B
- Interference boundaries harm allocation efficiency: useable “whitespace” spectrum outside where people need it

UIOLI will strengthen secondary trading

- Risk of losing spectrum provides positive incentive for secondary trading negotiations
- Benefits small players (who can help increase usage) and MNO portfolio rebalancing (incentive to resolve)
- Competition policy must be consistent with spectrum policy

Driving greater spectrum utilisation

A good UIOLI model can strengthen secondary trading





Instalment payments & Sharing

Payment by instalment is essential to address industry sustainability



- Mobile networks are expensive to operate, and globally many operators have been experiencing ROIC challenges.
- There's a need to actively explore and adopt measures which can help improve industry sustainability (supporting in turn better affordability for end users).
- High costs and revenue challenges augur for a conservative approach to renewal pricing.
- Annualised instalment payments are preferable to upfront payments:
 - The combination of multiple renewals (with 20-year tenures) in a short space of time (2028-2032) makes an upfront approach financially burdensome, likely to impact end user affordability.
 - Instalment payments enable better cashflow management, with lower commercial overhead.
 - We suggest using the government's risk weighted cost of capital to determine annualised payments.
- Instalment payments also simplify UIOLI:
 - “Forgone” spectrum results in payment cessation, rather than loss of entire upfront licence fee.

Spectrum sharing schemes harm allocation efficiency and have been unsuccessful globally



- Administered sharing arrangements are generally a poor way to manage access to spectrum assets.
- Sharing models have proven to be unwieldy and inefficient in practice (i.e. interference boundaries), diminishing overall spectrum utility.
- US example:
 - CBRS has been poorly utilised, generating \$4B licence revenue; C-band auction generated \$81B
- Market based approaches, inclusive of secondary trading, are a better way to improve spectrum utilisation.
 - Commercial incentives exist for market-based solutions, and UIOLI could potentially bolster these



UIOLI design

A good UIOLI model will strength secondary trading

But a bad model will harm the industry



- Unless annualised instalment payments are in place, UIOLI is not practical
- A limited grace period is required to give time for secondary trading to take place
- ‘Lose it’ must mean losing the entire licence to provide sufficient incentive for secondary trading
- We do not support:
 - A whitespace approach to “losing it” – is impractical, complex to administer, will create messy fragmentation and extensive boundary issues.
 - Incremental rollout obligations – where Government rollout priorities exist (e.g. highways), should be targeted through dedicated funding programs, not as a licence condition.
 - Use it or share it (UIOSI) – UIOSI is complex and there are material disadvantages around the management of any ‘sharing’ (administration, technology / case neutrality, edge case complexities etc).

Internationally UIOLI as a licence condition has been used to drive coverage

Australia's unique geography demands a different approach



Category	Criteria	General description	Suitability	Comments
Coverage	Population % coverage by licence area	Used to encourage technology rollout, including : <ul style="list-style-type: none"> • Drive 3G, 4G and 5G rollout; • Increased footprints; • First Nations connectivity; and/or • Ecosystem creation Also used for coverage maintenance, infill and improvement objectives.	Secondary trading support - good Driving “rollout” - low	<ul style="list-style-type: none"> • Local population distribution and large landmass are very different from foreign markets • Networks are mature, not at a “rollout stage” – competitive dynamics drive terrestrial coverage • First Nations connectivity addressed via dedicated Government funding programs • Market already responsive to new ecosystem needs (e.g. 4G on 700 MHz, mid band 5G)
	Square km of geography covered	Used to drive coverage rollout, typically in small licence areas.	Low	<ul style="list-style-type: none"> • Typically used in licence areas with a small geographical footprint – Australia, in contrast, has a large landmass and many large licence areas. • Not all bands are good for wide area coverage
	Specific public infrastructure coverage provision	Used to drive service for the community – e.g. motorways, railways etc	Low	<ul style="list-style-type: none"> • Better to address via dedicated Government funding programs
Service	Voice coverage per band or basket of bands (more a carrier licence condition)	Used to drive coverage quality. Progressive improvement may be required over the term of a licence.	Low	Differential coverage between MNOs – service claims are measured by commercial benchmarking, leading to marketing claims.
	Throughput (where to measure? At a customer handset? Where in the cell?)	Used to drive quality. Progressive increase in available throughput in more places, especially where there is a FW focus. Not very common.	Low	Differential coverage between MNOs – service claims are measured by commercial benchmarking, leading to marketing claims.

There's potentially a lot of detail, but the key elements of a **potential UIOLI framework are clear ...**



Clear objectives

Transparency

Regulatory guidance

Compliance

Use thresholds /
Measurement

Reallocation

UIOLI model detail (1/2)

Industry needs a clear, understood & timely process



Clear objectives

Focus on:

- supporting the efficient use of all spectrum, maximising public benefit
- supporting government communications policy objectives (i.e. economic development, prosperous regions, digital inclusion etc)

Regulatory guidance

Any future framework will involve:

- Instalment licence payments
- Outlining a process, roles and responsibilities
- Defining scope (i.e. exclude fragmented blocks, include rail & TV outside broadcast)
- Outlining use thresholds, how use is measured, how thresholds are to be applied
- A process for use reservations
- How 'lose it' is to be implemented if use thresholds are not met

Use it thresholds

We consider:

- Population coverage % thresholds are most suitable for Australia; area-based coverage thresholds (or simplistic site count approaches) are not suitable
- Low band threshold should be higher than mid / high band (coverage vs capacity)
- Outliers in current licence usage can be used to determine suitable thresholds
- Focus on efficient use; incremental (differential) rollout obligations are unworkable

UIOLI model detail (2/2)

Industry needs a clear, understood & timely process



Transparency: usage determination

Usage determination must be transparent:

- Existing ACMA (RFNAS, HCIS) and ACCC RKR data is sufficient for measuring population coverage % usage, minimising regulatory burden
- Usage should be measured independently for each licence geography (DTH use included)
- Usage determination should be publicly published at a regular cadence

Compliance

Multi-step compliance framework

- Trigger is usage (pop coverage %) below threshold approaching licence expiry or during new licence period
- Grace period for licence holder to resolve:
 - Build coverage to increase use;
 - Sub lease to increase use; or
 - Find a buyer through secondary trading.
- Lose it means losing the entire licence
- License is revoked and returned to market via auction – no competition limits should apply in respect of spectrum that was being used inefficiently.

Reallocation

How can underutilised spectrum be quickly reallocated to market?

- Auction is the best approach; no gifting of spectrum
- Competition policy must be aligned with spectrum policy: competition limits interfere with UIOLI principles

UILOLI in practice

